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DIRECTORY OF MANUFACTURES

The following list is designed to furnish buyers with a ready reference to Canadian industries. Every firm whose card appears below this heading is a member of The Canadian Manufacturers' Association, and is believed to be thoroughly reliable.

ACCOUNT BOOKS.

THE BROWN BROTHERS, Limited,
51-53 Wellington West, **TORONTO.**
Manufacturers of Account Books,
Leather Goods, etc. Stationers and
Bookbinders.

ACCOUNT BOOK PAPER.

THE ROLLAND PAPER COMPANY,
Quebec, **MONTREAL, Toronto.**
Makers of Account and Ledger Papers,
"Superfine Linen Record," "Canadian
Linen Ledger," "Earncliffe Linen Led-
ger," Grand Prix, Paris, 1900.

ACIDS.

**THE CANADA CHEMICAL
MANUFACTURING CO., LIMITED.**
Offices and Works: **LONDON.** Ware-
houses: Toronto and Montreal.
ACIDS of commercial and chemically pure
quality. Prompt shipments in tank cars,
drums, carboys, and small containers.

AGRICULTURAL IMPLEMENTS.

DAVID MAXWELL & SONS,
ST. MARY'S, ONT.
Manufacturers of Harvesting Machines,
Stock Raisers' Implements and General
Farm Machinery.

The WILKINSON PLOUGH CO., Ltd.,
TORONTO, Canada.

Walking, Sulky and Gang Ploughs, suitable for
all soils; Land and Lawn Rollers; Seuffers.
Manure Spreaders, all sizes.
Harrows, drag and disc. Wheelbarrows.
Pneumatic Delivery Straw Cutters, unlimited
capacity.

ARCHITECTURAL IRONWORK.

CANADA FOUNDRY CO., Limited,
Head Office and Works, **TORONTO, Ont.**
District Offices: Montreal, Halifax, Ot-
tawa, Winnipeg, Vancouver, Rossland,
Calgary.
Beams, Channels, Columns, Angles, Grills,
Fences, Railings, Bank Fittings, etc. De-
signs sent on application.

AUTOMOBILES.

CANADA CYCLE & MOTOR CO., Ltd.,
TORONTO JUNCTION, CAN.
Manufacturers of Bicycles, Motor Vehi-
cles and Bicycle accessories. Catalogues
on application.
Western Union and A. 1 Code used.

AXES.

DUNDAS AXE WORKS,
DUNDAS, CANADA.
P. Bertram, Manager.
Manufacturers of all kinds of Chopping
Axes, making a specialty of quality and
finish.

BABBITT METAL.

ALONZO W. SPOONER,
PORT HOPE, ONT.
Manufacturer of Copperine Box-
Metal, Nicoluminam Babbitt Metal,
Tinsmiths' Solder and Phenyle Disin-
fectant.

BAGS.

JOHN DICK Limited,
77 York Street, TORONTO.
Manufacturers of Jute and Cotton
Bags, Hessians, Twines, Etc.

THE DOMINION BAG CO., Limited,
MONTREAL.
Bags of every description in Cotton and
Jute. Printing a Specialty. Importers
of Twine, Hessians, Burlaps, etc.
Cable Address—"Dombay."

THE CANADA JUTE CO., Limited,
492 William St., MONTREAL.
Manufacturers of Jute and Cotton Bags.
Importers of Twines, Hessians, Bag-
gings, etc.
Telegraphic address, "Calendar," Mont-
real.

BANK AND OFFICE FITTINGS.

THE GLOBE FURNITURE CO., Ltd.,
WALKERVILLE, ONT.
Manufacturers of Counters, Screens and
Metal Work for same; Standing Desks,
Dado, Doors and General Interior Fin-
ish; Store Fixtures.

BILLIARD TABLES.

SAMUEL MAY & CO.,
102-104 Adelaide St. W., TORONTO.
Billiard Table Makers.
Billiard and Pool Ball Turners.
Billiard Cue Makers.
Billiard Cloth Importers.
Send for Catalogue and Price List.

BOATS.

H. E. GIDLEY & CO.,
PENETANGUISHENE, ONT., CAN.
The largest Wholesale and Retail Manu-
facturers in Canada of Canoes, Skiffs,
Steam and Gasoline Launches, &c. Home
and Foreign Trade solicited.

BOILERS—WATER TUBE.

GEORGE BRUSH,
34 King St., MONTREAL.
Manufacturer of Steam Boilers, Mar-
ine and Stationary, and Kingsley Pat-
ent Water Tube Boilers, the best and
most economical boiler in the market.

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**THE AMES-HOLDEN CO. of MONT-
REAL, Ltd. MONTREAL, QUE.**
Boots and Shoes. Sole selling agents
for the Granby Rubber Company.
Branches—St. John, N.B.; Toronto,
Ont.; Winnipeg, Man.; Vancouver, B.C.;
Victoria, B.C.

BOXES.

G. & J. ESPLIN,
Office, 120 Duke St., MONTREAL, QUE.
Box Manufacturers,
Lumber Merchants,
Saw and Planing Mills.

BARCHARD & CO., Limited,
135-151 Duke St., TORONTO.
Manufacturers of Wood Packing Boxes
of every description.
Wood Printers.
Telephone Main 30.

BRASS GOODS

THE GARTH COMPANY,
Manufacturers of **MONTREAL.**
Brass and Iron Goods for Plumbers,
Gas and Steamfitters.
Fire and Water Department Supplies.
Ornamental Brass Work, Gas and
Electric Fixtures.

THE LONDON BRASS WORKS COMPANY Limited
LONDON, - - ONT.
MANUFACTURERS OF
High Grade STEAM VALVES, Steam Stop
Cocks, Water Works Supplies, Compression
Bibbs; also Walter's Patent Renewable
Seat and Disc Valves, Brass Castings, etc.

BRASS GOODS—*Continued.***THE ROBERT MITCHELL CO., Ltd.,
MONTREAL.**

Manufacturers of Brass Goods for plumbers, gas and steamfitters. Gas and Electric Light Fixtures, Ornamental Brass and Iron Work.

**EMPIRE MFG. CO.,
443 Talbot St., LONDON, ONT.**

Manufacturers of High Class Globe and Gate Valves, and a full line of up-to-date Plumbers' and Steam Fitters' Goods, and all kinds of Special Brass Goods. Telephone 176.

**THE JAMES MORRISON BRASS
MFG. CO., Limited,
89 to 97 Adelaide St. W., TORONTO.**

Manufacturers of Brass and Iron Goods for Engineers and Plumbers; Locomotive and Marine Brass Work; Gas and Electric Fixtures. Telephone Main 3836.

**PENBERTHY INJECTOR CO., Limited,
WINDSOR, ONT.**

Manufacturers of "Penberthy" Automatic Injectors, XL-96 Ejectors, Brass Oilers and Lubricators, Water Gauges and Gauge Cocks, Air Cocks, etc.

BREWERS.

**E. L. DREWRY
REFINED ALE
(Registered)****REDWOOD LAGER
FAVORITE BRANDS**

WINNIPEG MANITOBA

BRIDGES—STEEL.

CANADA FOUNDRY CO., Limited,
Head Office and Works—TORONTO,
ONT. District Offices—Montreal, Halifax, Ottawa, Winnipeg, Calgary, Vancouver, Rossland.

Highway and Railroad—We are prepared to submit estimates on the construction and erection of any steel structures of this nature.

**The CANADIAN BRIDGE CO., Limited,
WALKERVILLE, ONTARIO.**

Manufacturers of Steel Buildings, Roof Trusses, Railway and Highway Bridges, and Structural Steel and Iron Work of all descriptions.

Estimates furnished upon application.

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**CANADIAN CANNERS, Limited,
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Packers of High Grade Canned Fruits, Vegetables, Meats, Soups, Catsups, Jams, etc. 30 factories operated and located throughout Ontario, the Garden of Canada.

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**PETERBOROUGH CANOE CO., Ltd.,
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The leading manufacturers of Canoes, Skiffs, Launches and anything that floats.

Get our catalogue and prices.

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THE TORONTO CARPET MANUFACTURING CO., Limited, TORONTO.

Wilton and Brussels Whole-Carpets, Bodies, Borders, and Stairs. Axminster (reversible) Whole-Carpets and Rugs.

Smyrna Whole-Carpets and Rugs. Ingrain Art-Squares and 4 x 4 Piece Carpets.

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J. B. ARMSTRONG MFG., CO., Ltd.

The Guelph Carriage Goods Co. Incorporated
Established 1834. **GUELPH, Canada.** 1876.

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FINISHED CARRIAGES.**

A wholesale trade done through dealers for Home and Export. Catalogue on application. Cable address—"Armstrong," Guelph. A B C Code.

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**CHATHAM. WINNIPEG.
ST. JOHN, N.B. OTTAWA.**

CARRIAGE AXLES & SPRINGS.

**GUELPH SPRING AND AXLE MFG.
CO., Limited, GUELPH, ONT.**

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MONTREAL STEEL WORKS, Limited,

Manufacturers of Steel Castings (Acid open Hearth System), Springs, Frogs, Switches, Signals for Steam and Electric Railways.

Canal Bank, Point St. Charles,
MONTREAL.

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**THE HANOVER PORTLAND CEMENT
CO., Limited.**

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Manufacturers of the famous "Saugeen," a high-grade Portland Cement.

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Manufacturers of "Monarch Brand" Portland Cement. Used largely by the Dominion Government and leading corporations and contractors.

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**A. F. MacLAREN IMPERIAL
CHEESE CO'Y., Limited,
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Manufacturers of MacLaren's Imperial Cheese and agents for Grocers' Specialties. Correspondence solicited.

Cable Address, "Dairymaid," Toronto.

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**THE CANADA CHEMICAL
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Offices and Works: LONDON. Warehouses: Toronto and Montreal.

CHEMICALS of commercial and chemically pure quality; for all industrial and technical requirements.

**McARTHUR, CORNELLE & CO.,
MONTREAL.**

Supplies for manufacturers in every line at closest prices.

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**THE GENDRON MFG. CO., Limited,
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Makers of Children's Vehicles, Reed and Rattan Furniture.

COMMERCIAL PUBLICATIONS.

**THE MONETARY TIMES,
TORONTO,**

If you would keep posted as to Canada's development, you should read The Monetary Times.

\$2.00 per annum.

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**FLETCHER MANUFACTURING CO.,
TORONTO, CANADA.**

Onyx, Marble and Silver-Plated Soda Water Fountains; Bakers', Confectioners', and Cooks' Tools, Machines, Utensils and Supplies; Waxed Paper Julep Straws.

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**M. BEATTY & SONS,
WELLAND, ONTARIO.**

Manufacturers of Steam Shovels, Dredges, Ditchers, Derricks, Hoisting Engines, Hoisting Machinery, Stone Derrick Irons, Centrifugal Pumps, and other machinery for Contractors' use.

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**THE BOOTH COPPER CO., Limited,
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Coppersmiths and Metal Spinners.
Brewers', Distillers' and Confectioners'
Copper Work.

**COULTER & CAMPBELL,
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Manufacturers of Distillers', Brewers'
and Confectioners' Copper and Brass
Work, Marine, Dyers', and Varnish,
Copper and Brass Work. Metal spin-
ning work to order.

CORDAGE.

**SHURLY & DERRETT,
Dovercourt Twine Mills,
Bloor St. W., TORONTO.**

Manufacturers of Cotton, Jute, Hemp,
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Lines, Fish Lines, Tennis Nets, etc.

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**HIRAM WALKER & SONS, Limited,
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And London, New York, Chicago, San
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"Canadian Club" Whisky.

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**THE MERCHANTS DYEING AND
FINISHING CO., Limited,
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Dyers and Finishers of all classes of
Woollen or Half-Wool Dress Goods,
whether made in Canada or Europe.
Also Japanese Silks.

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**McARTHUR, CORNEILLE & CO.,
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Aniline and Alizarine Colors; Dyewoods,
Extracts, etc.

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Apparatus of all kinds—Power, Lighting, Rail-
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**CANADIAN OTIS ELEVATOR CO., Ltd
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Manufacturers of High Class Electric,
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Dumb Waiters, Hoisting Machinery.

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Hydraulic, Power and Hand Elevators, and
Dumb Waiters.

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Enameled Sheet Metal Ware; Stamped Ware;
Sheet Steel; Galvanized, Japanned and Copper
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Engineers, Boilermakers, Steel Ship-
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row and Moscher Water Tube Boilers.
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Engineers, Boilermakers and Machin-
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Importers
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Manufacturers of Pews, Rails, Screens,
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Model Automatic Desks and Teachers'
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Rattan Furniture.

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J. ARTHUR PAQUET, QUEBEC, P.Q.,
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Manufacturers of all styles of Rim and Mortise Locks, Knobs, Escutcheons, Door Bells, Butts, etc., etc.
Catalogue on application.
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H. LAMONTAGNE & CO., Limited,
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Manufacturers,
MONTREAL.

"Daisy" Hot Water Heater. "Gem" Hot Water Heater. "Gem" Steam Heater. "Daisy" Bath Heater.
Send for Catalogue.

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CANADA HORSE NAIL COMPANY, Montreal
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Samples and quotations on application. Shipments arranged anywhere.

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JEWELLERY.

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A. R. CLARKE & CO., Limited,
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Manufacturers of Enamelled Colt, Glazed Kid, Dice and Dull Calf, Gloves, Mitts and Moccasins.
Works—613-617 Eastern Ave.
Montreal Agency—59 St. Peter Street.
Quebec Agency—492 St. Valier Street.
Cable address, "Arc," Toronto.

LEATHERS—FANCY.

WICKETT & CRAIG, Limited,
Don Esplanade, Front St. E.,
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Manufacturers of Staple and Fancy Leathers, Bag, Bookbinders', Bridle, Saddle, and Shoe Leathers.
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Linseed, Cotton Seed, Olive and Castor Oils; Neatsfoot, Sperm, Seal, Whale and Cod Oils; also Mineral Oils and Greases of all sorts.

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Manufacturers of High-Grade Reed Organs, Upright and Grand Pianos, and Automatic Piano and Organ Players. Branches at 49 Holborn Viaduct, London, E.C., 15 Bridge St., Sydney, N.S.W.

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1875 CLINTON, CANADA. 1903

Manufacturers of the Famous High-Grade Doherty Organ. European Representative — W. W. Clarry, 12 Lancelots Hey, Liverpool, England.

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Paint, Color, and Varnish Manufacturers.

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Largest Paint and Varnish Makers in the World
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THE RIORDON PAPER MILLS,
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Merritton Mill—News Paper, Hanging Paper, Wrapping Paper and Building Paper, and Sulphite Pulp.
Hawkesbury Mill—Sulphite Pulp.

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Makers of Super Book.
Envelope and Writing Paper.
Colored Flats and Linen Ledgers.

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Makers of "Superfine Linen Record,"
"Canadian Linen Ledger," "Earncliffe
Linen Bond." Grand Prix, Paris, 1900.

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Manufacturing Pharmacists and Biologists.
Laboratories and General Offices,
WALKERVILLE, ONT.
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MONTREAL, QUE.

PIANOS.**THE BELL PIANO & ORGAN CO., Ltd.,
GUELPH, ONT.**

Manufacturers of High-Grade Upright and Grand Pianos, Reed Organs, and Automatic Piano and Organ Players.
Branches at 49 Holborn Viaduct, London, E.C.; 15 Bridge St., Sydney, N.S.W.

PIANOS—*Cont.***GERHARD HEINTZMAN, Ltd.,
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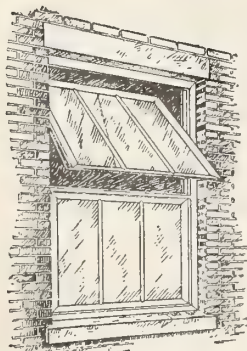
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Vol. VI.

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No. 1

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Advertising Manager, B. L. ANDERSON.

BELATED AND RAILROADED LEGISLATION.

IT is to be regretted that very important legislation dealing with the relations existing between the employers and employees has been passed at Ottawa in the dying hours of Parliament, and further that such legislation should be tacked on to contentious measures, and thereby smothered and railroaded into our statute books. The session of the Dominion Government just closed gives us an example of how these dangerous practices are made effective.

On February 21st, 1905, not long after Parliament opened, Mr. Hugh Guthrie, M.P., who by the way was the strongest advocate in the House of Commons for the Union Label Bill, introduced Bill No. 67, "An Act to amend the Criminal Code, 1892." This bill was an amendment to section 523 of the Code, the object of which is to prevent or to punish violence, intimidation, the hiding of tools, the following of persons, picketing and such offences as are generally associated with labor troubles. Magistrates had held that under the Act it was for them to say whether the accused should be tried on indictment or on summary conviction, and any other interpretation would destroy the whole effect of the clause. The amendment gives the accused the right to elect.

When a strike is on and lawlessness is rampant, the guilty ones must be punished promptly. To have the accused go before a magistrate and elect to be tried by a jury and then to secure his liberty on bail makes the arrest a farce. To punish an offender six months after the arrest and when the labor trouble is settled, not only fails to prevent other acts of lawlessness

during the strike, but makes a conviction hard to secure and the prosecution, as nothing is to be gained by it, most objectionable.

Mr. Guthrie's effort was not popular, and when he had introduced the measure on February 21st, he evidently thought he had done all his constituency desired of him, and he neglected the measure until by Government procedure it was impossible without consent especially obtained to proceed with it.

Nothing more was heard of the Bill till the dying days of the session, then fortune smiled. The Government introduced a bill entitled "An Act to amend the Criminal Code, 1892," which was exactly what Mr. Guthrie's Bill was called. The Government measure dealt entirely with trading stamps, a subject which had no connection whatever with strike legislation, yet the labor unions had their bill tacked on as clause 3 of the Trading Stamp Bill. Thus Mr. Guthrie's Bill, which had little chance of passing on its merits, became part of the trading stamp legislation.

The Trading Stamp Bill met with opposition in the Senate. The Government knew that if a single word of the Bill was changed it would permit the House of Commons to again discuss the measure, and this they decided to prevent, as the House of Commons had finished its work and was only waiting for adjournment.

The Senate recognized the danger of the Guthrie amendment. Hon. Senator Scott, and the Hon. Senator Templeman did not wish to press it. In Committee, the Hon. Senator McMullan moved, seconded by Hon. Sir McKenzie Bowell, that the clause be struck out. Immediately this was done the Senators raised a protest against any change in the Bill having to do with Trading Stamps. The result was that the labor amendment was railroaded through because Mr. Guthrie had cleverly attached it to the trading stamp legislation.

This is not the first time that such tactics have been adopted. In the session of 1904 an Alien Labor Bill was introduced into the House of Commons during the last days of the session. The Canadian Manufacturers' Association protested at that time, and in the annual report of its Parliamentary Committee, 1904, referred to it as follows:—

"Your Committee would recommend that the Association should place upon record its strong disapproval of attempts made to carry any class of industrial legislation through the Canadian Parliament or Legislature on short notice, and without giving ample time for those most concerned in the operation of such measures to study them carefully, weigh their significance and make such representations to the Government as they desire."

The practice is a dangerous one, and the principle is most objectionable. Any legislation that must be handled by such methods is important enough to leave over for a session, and is too important to be rushed through without those who are likely to be directly affected being given an opportunity to express their views.

THE BUDGET OF 1905.

AS was expected, Mr. Fielding did not make many tariff changes in his recent Budget speech. It had been announced that the tariff would only be revised after full inquiry had been made by a Government Commission. This was again made clear. The Commission will start its investigations almost immediately, and we may look for an entirely new and up-to-date tariff in 1906.

The announcement that the new tariff would be one of three schedules, although suggested on a previous occasion, was none the less acceptable. It will give Canada an opportunity to show our extreme tariff friends in the United States that Canada is determined to manufacture a large portion of the seventy or eighty odd million dollars worth of manufactured goods that we have been content to purchase from them. It will have other far-reaching results. It will enable our factories to increase their output and lessen the cost of production, and, equally as important, it will force United States manufacturers, if they wish to do business here, to duplicate their plants in Canada. To these new factories and to this home competition every one extends a hearty welcome. Home competition, which must necessarily be carried on under similar conditions, is fair competition.

The centre schedule, or, as it is called, the Minimum General Tariff, will enable Canada to deal on a fair basis with those countries outside of the British Empire which show a willingness to trade with Canada, or which have a more favorable tariff than such countries as the United States and Germany.

The lowest schedule, or the British Preference, is the standing offer of Canada in the direction of closer trade relations for the Empire. This preferential policy has exercised a powerful influence within the Empire and has already secured for Canada preferential treatment in South Africa and New Zealand. Truly it resulted in hardship to some of the industries. The method of its application was no doubt responsible for this. Some items in the 1897 Tariff could probably stand a reduction of one-third, but a similar reduction in others was disastrous. The Commission will now have an opportunity to adjust the preference so as to be at least as beneficial on the whole to other parts of the Empire, while at the same time they will have to keep in mind the necessity of maintaining this preferential schedule sufficiently high to prevent a ruinous competition for any of our industries.

Mr. Fielding's tariff utterance was decidedly protectionist. The time has come when the tariff is recognized in Canada as a business proposition, and as a necessity for the development of our industries. The specific changes made were not numerous. Each of them was made from a protection standpoint, and evidently the question of revenue was not a consideration. The duty of 60c. per 100 pounds on rolled oats was adopted because the duty on oats was higher than the duty on the rolled oats—an unjust discrimination. There are many such discriminations in the tariff as it stands to-day and we may now confidently expect the Commission to rectify them.

The duty on dry white lead was increased from 5% to 30%, to encourage the white lead industry. In addition to the lead factory, the mines in British Columbia will surely benefit. This increase made it necessary to increase the duty on white lead ground in oil from 25% to 35%.

The duty on the bags used as packages for cement was another inconsistency in the tariff. Bags under the tariff are dutiable when imported empty, but when they come in full of cement the bag has been just regarded as so much cement. The bags are now dutiable at 25%.

These are the more important changes. Others dealt with a preference on South African wines, the duties on settlers' effects and on molasses and an extension for one year of the privilege of importing machinery for alluvial gold mining and beet root sugar factories free of duty.

The few changes made show that the Dominion Government intend to see Canadian industry properly protected. This principle is accepted and we look to the Tariff Commission to apply the same where needed and to eliminate discrimination where it exists.

THE VISIT TO GREAT BRITAIN.

THE visit of the Canadian Manufacturers' Association party to Great Britain has proved to be one of the most important events of the present year. The number and representative nature of the party, the magnificence of the reception accorded them, and the results already flowing from the visit, mark it as a unique enterprise, calculated to play an important part in the still closer union between the motherland and Canada.

Only those who had the good fortune to be of the party can know the warmth of the welcome given to the Canadians. They were not only graciously received at Windsor Castle and entertained by leading public bodies and men throughout Great Britain, but their coming was the signal for demonstrations of welcome from the masses of the British people at every point visited. The trip was national rather than sectional, and questions of mutual interest were discussed on the broadest possible lines.

But what of the results? It is no exaggeration to say that these can scarcely be over-estimated. Time alone will reveal the influences set at work, the increased interest aroused, and the actual good accomplished by the visit.

Of the Canadians it may be said that all of them are returning with a new pride and satisfaction as citizens of the great Empire of which they form a part. They are impressed with the greatness of the Mother Country, in history, in commerce and in wealth. They have experienced the genial current of hospitality which flows from the affection of Britain for her colonies. They have seen for themselves those teeming cities which mark the little Islands as the greatest producing and consuming market of the world. Britain imports annually more than £500,000,000. Of this she buys about £25,000,000 from Canada. Why should not Canada supply a much larger quantity?

But it is safe to say that if the visit has opened the eyes of the Canadians, it has had a much wider influence upon the people of Great Britain. A new interest in Canada has been aroused. Every phase of Canadian development has been brought more clearly to the attention of the British public. Industry, immigration and mutual trade with Canada have been specially emphasized in the British press, with comments more favorable to the Dominion than ever before.

It particularly impressed British investors to know that so many millions of capital were being invested in Canadian industries by the people of the United States, while only a very small amount comparatively is forthcoming from Great Britain. The advantages also of sending the best British emigrants to British dominions met with the hearty endorsement of British audiences.

The views of the Canadian Manufacturers' Association with regard to the development of Canadian industries and Imperial trade relations were expressed by its representatives with a frankness and earnestness which foretold the wonderful expansion of Canada, and upon those broad lines which revealed the true Imperial sentiment of the Canadian people in the moulding of their trade policy. These views, communicated to many public men and representative bodies in Great Britain, met everywhere with profound respect, and, so far as we know, with approval.

The Association, and particularly those members who composed the party, will ever be under deep obligations to their genial hosts in Great Britain, and particularly to the London Chamber of Commerce who so successfully arranged their tour; and it is our earnest belief that the excursion will not only live in the memories of all those who took part in it, but that it will form a golden link in the progress and unity of the Empire.

THE TARIFF COMMISSION.

THE manufacturers of Canada, and in fact, the entire business community, have learned with profound gratification that the Dominion Government have now appointed a Commission to thoroughly revise the Canadian tariff. When it is considered that the present Customs Tariff has been in force in Canada with comparatively few alterations since the year 1897, and that the progress made by the industries of the Dominion has been, during that period, one of the most remarkable features of our striking development, the necessity for the revision is at once plain.

No doubt, the enactment of the Anti-Dumping regulations, and the results, both actually and morally, accruing from these measures, have served to delay the revision until the present time. But it is evident that public opinion, and business sentiment throughout Canada have gradually developed with the changing conditions of the past decade into the earnest conviction that a protective policy with a distinct Canadian tone and purpose is the one policy for the Dominion.

This Association has always advocated a tariff framed to meet the conditions of the day, and not necessarily copied from any other. The maximum and minimum system proposed by the Dominion Government is original and, if operated on a scientific basis, will undoubtedly accord with the national spirit, and bring the greatest development to the Dominion.

In the revision of the tariff no items require more consideration or scientific treatment than those connected with the manufacturing industries. It should be the duty of all manufacturers desiring changes in the present tariff to communicate at once with the Secretary of the Tariff Commission, Mr. John Bain (Ottawa), and to follow up the request for a hearing with the careful preparation of the facts. Let the cases be well prepared, and submitted in brief yet comprehensive form. The revision involves many difficulties, and these can be in many cases minimized or avoided through the co-operation of the manufacturers and the consequent reconciliation of conflicting interests. In this commendable work, the Association places itself at the service of its members.

THE COAL USED IN ONTARIO.

SOME months ago the Toronto Branch of the Canadian Manufacturers' Association shipped to coal owners in Wales samples of six different grades of coal. These samples were of coal such as is used every day in the factories of Ontario and were imported from the United States. The English collieries requested the coal for testing purposes and to ascertain whether or not coal of similar properties could be delivered to Ontario points at prices to compete with the prices for which the United States coal was sold. The investigations are still being carried on and the feasibility of the project has not been decided. The analysis of the coal is given herewith:—

Chemical Constituents	Description Furnished with Sample.					
	Stove Coal	Pea Coal	Hard Screenings	Soft Screenings	Maslin Screenings	Steam Coal
Fixed Carbon	84.43	81.63	75.17	55.47	55.40	60.63
Volatile Matter ..	3.77	5.22	5.13	31.88	33.55	31.87
Ash	7.80	9.10	15.50	10.50	4.20	6.10
Water	4.00	4.05	4.20	2.15	6.85	1.40
Total	100.00	100.00	100.00	100.00	100.00	100.00
Sulphur (separately estimated)	0.67	0.85	0.95	4.06	1.21	2.40

Llewellyn J. Davies, F.C.S.,
The Coal Laboratory, Cardiff.

MANUFACTURERS' ASSOCIATION OF GREAT BRITAIN.

AS imitation is said to be the sincerest flattery, it is gratifying to know that along lines similar to those of the Canadian Manufacturers' Association, the leading manufacturers and shippers of Great Britain are forming themselves into what will be known as the Manufacturers' Association of Great Britain. Through the organization the principal Manufacturers' and Merchants' Chambers of Commerce and Shipping and other kindred bodies are to be affiliated and by co-operation, British trade in colonial and foreign markets is to be promoted and strengthened.

Correspondents in all parts of the world are to be appointed to supply information in respect of trade opportunities, tariff changes and the general commercial conditions obtaining within their respective spheres. A Trade Index published in a number of the principal foreign languages will be largely distributed in all countries and a knowledge of British goods will be systematically disseminated in all possible foreign markets.

In commenting upon the formation of this organization, the *Birmingham Daily Post* says that "one of the most hopeful signs for the future of British industry is the ability of the British manufacturer and merchant to learn from the experience of their competitors," and that "while in the past they have been accused, and often rightly, of being old-fashioned and unable to adapt themselves to the new conditions and requirements of foreign markets, of late there have been signs of that awakening which the Prince of Wales declared necessary." Continuing, the *Post* says: "At home manufacturers have shown much less hesitation in 'scrapping' their obsolete plants, and in the Midlands, in common with other parts of the country, we have had instances where this has been effectively done and the best ideas have been borrowed from abroad in the re-equipment of factories which now are foremost in maintaining their position in face of domestic and international competition keener than has ever been known before. Whether selling methods in foreign markets have been equally improved is difficult to decide in view of the absence of visible evidence such as that presented by reorganized factories; but this is known, our export trade for close upon a year has been steadily expanded, both in volume and total value."

OPENINGS IN SOUTH AFRICA.

MR. CHARLES M. KITTSOON, Canadian Commercial Agent for South Africa, Rhodes Buildings, St. George and Wale Sts., Capetown, South Africa, has written to the effect that it would be of mutual assistance to the manufacturers of Canada and to himself if the manufacturers were to keep him supplied with their up-to-date catalogues, together with information regarding export prices and discounts. The Association wishes to impress on its members the advisability of complying with Mr. Kittsoon's request. There is a large and important market in South Africa. Mr. Kittsoon is not only willing but anxious to have Canadian manufacturers get a larger share of it, and to accomplish this he requires their assistance.

NOTICES.

ANNUAL MEETING — Montreal Branch — Board of Trade Building, Montreal. Thursday, August 24th, 3 p.m.

COMPLIMENTARY DINNER to MR. W. K. GEORGE, National Club, Toronto. August 17th, 8 p.m.

ANNUAL CONVENTION CANADIAN MANUFACTURERS' ASSOCIATION, Chateau Frontenac, Quebec. September 18-20.

Executive Council

JULY MEETING.

National System of Technical Education Recommended to Government—Sample of Canadian Manufactured Goods and Canadian Trade Index for Japanese Commercial Museums—Trade and Navigation Reports and the Tariff Revision—Sixth Congress of Chambers of Commerce—Minimum Tariff Treatment for Canadian Goods in Japan—Reception to Mr. George—Messrs. J. S. Larke, Trade Commissioner to Australia, G. J. Manger, of Melbourne and George Edwin Wise, of Sydney, address Executive Council on Canadian-Australian Trade Relations.

The regular monthly meeting of the Executive Council was held on July 20th, 1905.

There were present:—Messrs. J. F. Ellis, Toronto; Jas. P. Murray, Toronto; E. G. Henderson, Windsor; Thos. Roden, Toronto; L. V. Dusseau, Toronto; Geo. D. Forbes, Hespeler; Jas. Goldie, Guelph; Geo. Booth, Toronto; C. N. Candee, Toronto; Wm. Stone, Toronto; A. Saunders, Goderich; J. S. McKinnon, Toronto, and P. W. Ellis, Toronto. In the absence of the officers of the Association, Mr. J. F. Ellis presided.

Minutes of the June meeting which had been published in full in INDUSTRIAL CANADA were taken as read.

Communications.

Communications were received as follows:—

(1) Messrs. C. C. Ballantyne, P. McMichael, H. Wright, J. O. Thorn, J. J. McGill, C. H. Waterous and Geo. E. Amyot, regretting that they were unable to be present.

(2) Mr. J. O. Thorn called the attention of the Association to a clipping published in a Winnipeg paper of July 11th to the effect that stone for the new post office in Winnipeg was being imported from the United States. The Council decided to call this to the attention of the Winnipeg Branch and ask for an opinion regarding the necessity for such action.

(3) From the Secretary of the Toronto Branch advising the Association that the Executive Committee of the Branch had decided that the time was not opportune for incorporating as members of the Branch the members of the Association in towns near Toronto.

The reports of officers and committees were then presented.

Assistant Secretary's Report.

The Assistant Secretary reported that during the month all the standing committees with the exception of the Tariff Committee had met and also the Technical Education Committee and the Convention Arrangements Committee. In addition three Section meetings had been held and a number of meetings regarding the coming tariff revision.

He also reported that advertising contracts for the Canadian Trade Index amounting to \$2,800 had been received.

Treasurer's Report.

The Treasurer presented his statement for the month of June, which showed the finances of the Association to be in a satisfactory condition.

Finance Committee.

The report of the Finance Committee was presented by Mr. P. W. Ellis and recommended the payment of accounts owing by the Association up to date.

Convention Arrangements Committee.

The Committee reported that official notice had been sent out calling the annual meeting of the Association for September 18, 19 and 20, and that a notice had also been forwarded regarding amendments to the constitution and dealing with nominations.

The Committee decided that the badge to be used for the Convention should be similar in pattern to that used by the British Excursion party, but that the colors and wording should be changed. Special note paper advertising the Convention will be used as office stationery for the next three months.

Technical Education Committee.

This Committee presented a lengthy report of their investigations regarding the question of technical education. It was received by the Executive Council with the understanding that the same should be printed for distribution at the annual meeting. The report concluded with a resolution as follows:—

“That whereas the governments of the important manufacturing and commercial nations of the world have extensively developed their various systems of Technical Education and have thereby done much to gain the manufacturing supremacy they now possess,

“And whereas no serious effort has been made in Canada to develop a system of Technical Education and the Trade and Commerce Department of the Dominion Government has not recognized it as one of the spheres of its activity,

“Therefore be it Resolved,—That the Dominion Government be requested to appoint a commission to report on the best method for establishing a national system of Technical Education to provide Canadian industry and commerce with trained assistants from amongst the Canadian people and thereby aid in developing Canadian industry, and do away with the present condition of affairs, which compels employers to go abroad for men to occupy the more responsible and more remunerative positions in Canadian enterprises.”

Industrial Canada Committee.

The INDUSTRIAL CANADA Committee reported that the financial statement for the paper up to July 1st was fairly satisfactory and that several important articles had been submitted and approved of for publication in the coming issues of the paper.

Parliamentary Committee.

The report of the Parliamentary Committee was presented by Mr. P. W. Ellis. This report is published in full in another column.

Commercial Intelligence Committee.

In the absence of the Chairman, Mr. A. S. Rogers, his report as below was read by the Assistant Secretary:—

As there were only a few matters of importance before the Commercial Intelligence Committee it was not deemed advisable to call the Committee together during the past month. I beg, however, to report on matters of interest as follows:—

Japanese Museums.—Mr. W. A. Burns, of the Exhibition Branch of the Department of Agriculture, in writing to the Association for copies of the Canadian Trade Index for different Commercial Museums in Japan advised the Association that manufacturers could have samples of their goods placed on exhibition at these different museums free of charge. I thought it well that publicity should be given this information in the columns of INDUSTRIAL CANADA.

Trade and Navigation Returns.—Your Committee recommended some time ago to the Department of Customs a number of changes that they considered should be made in the Trade and Navigation Reports, the object being to make information as published therein more valuable by providing figures for a number of items which are at present either not mentioned or included in general headings and their value destroyed. The Assistant Commissioner of Customs wrote under date May 31 as follows:—

“I beg respectfully to say to you that in view of the probable entire revision of the tariff at an early date, it has been deemed advisable to defer full consideration of your suggestions. As a rule, a revision of the tariff necessitates many changes in that statistical classification. I think you will agree with me that it

would be well to start off a new tariff with a new classification. This would be advisable for more reasons than one, but particularly for comparative purposes. I may say now that the Department approves of quite a large number of the suggestions you have made, and it is altogether likely that we will adopt them when the time is opportune." This decision has been communicated to the members interested.

Chamber of Commerce Congress.—An invitation has been received from the Secretary of the London Chamber of Commerce, asking the Association to take part in the sixth Congress to be held in London about the end of June, 1906. As has been the custom of the Association in previous years, I would suggest that the Council consider the advisability of accepting this invitation, and that a committee consisting of Messrs. W. K. George, P. W. Ellis, W. K. McNaught and the undersigned be appointed to prepare resolutions to submit to the Congress and that these resolutions be incorporated in the annual report of the Commercial Intelligence Committee, which will be presented to the annual meeting of the Association in Quebec.

Trade of Japan.—The Commercial Intelligence Committee during the year 1903 had considerable correspondence with the Hon. Sydney Fisher regarding the desirability of Canada making an effort to secure minimum tariff rates from Japan such as were enjoyed by a number of the larger exporting countries. The Hon. Mr. Fisher replied late in that year that this matter would have his early attention. It will be a matter of gratification to the Association to know that in the House of Commons on June 22nd, Mr. Fisher made a statement regarding trade with Japan and stated that the Government had already taken steps to have Canadian goods receive minimum tariff treatment. These arrangements if successfully carried out will affect particularly, condensed milk, hides, leather, leather goods, sugar, live stock, cotton and woollen goods, paper, enamelware, rubber goods, hats and caps.

Reception and Membership Committee.

The report of the Reception and Membership Committee was presented by Mr. L. V. Dusseau. Twenty applications for membership, the names of which appear in another column, were recommended for acceptance.

It was decided to publish a new list of the Association members corrected up to the beginning of the Association year, August 1st, and to have the same ready for distribution before the annual meeting.

Reception to Mr. George.—The Committee recommended that the Executive Council tender a reception to Mr. W. K. George, President of the Association, on August 17th, the date of the next Executive Council meeting. The Committee were of the opinion that the Council should take this opportunity to give official recognition to the very valuable services rendered by Mr. George to the Association and to Canada in the recent tour in Great Britain and France. The Executive Council approved of this suggestion and gave the Reception and Membership Committee power to make all necessary arrangements.

Railway and Transportation Committee.

The report of this Committee was presented by the Manager of the Transportation Department, Mr. Marlow, and appears in full in another column.

Fire Insurance.

The report of the Fire Insurance Department, as given below, was presented by the Vice-Chairman, Mr. J. P. Murray:—

In view of the decision of the Insurance Committee to adjourn until the return of many of the members now in Europe, there has been no meeting of the Committee during the month. The Advisory sub-committee, therefore, report that since the last Executive Council the Department has dealt with insurance of members to the extent of \$1,207,200, divided as follows:—

We have reported upon the policies of 8 members, representing an insurance of..... \$550,400

We have made inspection of the plants of 8 members, representing an insurance of.. 656,800

\$1,207,200

All the work of the month has been along the lines stated in the pamphlet issued during the month to the members, i.e., the endeavor to ameliorate the conditions met in the cases of individual members, and in this great success has attended our efforts.

The Advisory Committee has a number of important matters now under consideration, and it is hoped definite and substantial progress may be reported to the Insurance Committee, and by them to the Council at an early meeting.

The Insurance Committee was organized with twenty-one members, seven to retire in each of the three succeeding years; the Advisory Committee has now to report it has been decided that the following members shall retire this year:—

Messrs. P. H. Burton, P. W. Ellis, R. A. Donald, C. B. Gordon, Col. Wm. Gartshore. (No members have, up to this period, been named as representing Manitoba and British Columbia, but these will now be elected.)

The reports of the Toronto and Montreal Branches were received and are published in another column.

Australian Visitors.

The Executive Council was favored by having with them at their meeting three visitors from Australia, Mr. J. S. Larke, who has for the past ten years ably represented Canadian interests in the capacity of the Canadian Government Commercial Agent at Sydney, Mr. G. J. Mauger, Melbourne, and Mr. Geo Edwin Wise, of Sydney and Wellington.

All three gentlemen delivered very interesting addresses on the conditions in Australia, the trade relations between Australia and Canada and the possibilities for more favorable tariff arrangements. Their opinion was that Australia was ready for a reciprocal trade agreement which would have to be worked out in detail and which must not be confused with a sweeping preferential tariff arrangement.

The gentlemen were strongly of the opinion that the greatest need for the furtherance of trade between Canada and Australia at the present time was better transportation facilities. Although the C. P. R. had done a great deal, the large bulk of Canadian freight still went by New York, and was consequently under great disadvantages. Canada to get this business should have a service running from Montreal and Halifax.

Mr. Mauger, who is a protectionist and a close friend of the Hon. Alfred Deacon, the present Premier of Australia, described Mr. Deacon as a protectionist who was not going to sacrifice the interests of the manufacturers, but who was, at the same time, in favor of protection against the outside world, but preference in favor of the British Empire. His opinion was that one of the first questions Mr. Deacon would take up would be that of more favorable tariff arrangements with Canada.

The meeting then adjourned.

PARLIAMENTARY COMMITTEE.

The Parliamentary Committee held its monthly meeting on July 14th, and dealt with different subjects as follows:—

Commercial Travellers' License.

A communication was received from the Allen Manufacturing Co. with reference to the tax on commercial travellers in British Columbia and Quebec, suggesting that the Dominion Government should pass a general Act making it necessary for all travellers other than those representing Canadian and British firms to take out licenses. The committee decided to forward this suggestion to the Executive Council with the request that the Executive Council express an opinion regarding the principle involved.

Dealing with the question of commercial travellers' licenses, it was reported that the Dominion Government has asked the British Columbia Legislature to annul the Act recently passed in that Province. It was also reported that no steps have been taken to enforce the Act against foreign travellers in the Province of Quebec. The Executive Council did not take action regarding the above suggestion but considered it advisable that the same should be held over for further consideration.

Government Telephone Investigation.

Reports were received from the Montreal and Toronto Branches of the Association giving their views regarding present telephone systems. In view of the early adjournment of Parliament it was decided that no report should be made at the present time, but that an effort should be made to secure reports from the other branches and forwarded to the Select Committee at Ottawa, with conclusions as finally arrived at.

Niagara River Water Supply.

Your Committee at its last meeting decided to call attention to the Canadian Section of the Deep Waterways Commission to the dangers that exist from the power companies of the United States side of the Niagara using water to such an extent as to severely affect the water flowing over the Canadian Falls. The Waterways Commission promptly took action and a resolution was passed and forwarded to the Association as follows:—

"That the Secretary be instructed to inform the Canadian Manufacturers' Association that this Commission would take up the question of the uses of the waters of Niagara River as early as practicable, and that before the investigation is concluded public hearings will be held, of which due notice will be given."

Ontario Legislation.

The questions of Extra Provincial Legislation and Incorporated Company Franchises have both been put before the Provincial Government, and the Attorney-General has suggested that the Association bring them to the attention of his Department some time near the opening of the next session of the Ontario Legislature, both questions being such that if any change is made it would have to be made by Legislation.

Pure Food Laws.

A letter received from the Minister of Inland Revenue regarding the recommendations of the Parliamentary Committee and the Society of Chemical Industry re the Pure Food Laws stated that a bulletin would be issued in the near future and the Committee are of the opinion that this bulletin will contain at least some of the recommendations advanced.

Ontario Assessment Act.

There is apparently a great difference of opinion regarding the intention of the Ontario Assessment Act as to what constitutes income for purposes of assessment. It was the opinion of the Committee that shareholders in companies also receiving salaries from companies should not be assessed, but this view evidently was not held by the assessors. Two of the members of the Committee in the city have sent in appeals against their assessment and were getting legal opinions regarding the same. The Secretary was asked to communicate with Messrs. Thomson, Tilley & Johnston, who looked after the interests of the Association before the Legislature, and get their opinion regarding the intention of the Act, and call the meeting of the Parliamentary Committee to decide if it was advisable to take action.

Bill No. 67.

The Secretary reported that Bill No. 67, an Act to amend the Criminal Code, had been, by special arrangement, put on the order paper of the Dominion Parliament for consideration. The intention of this bill is to provide that the accused and not the Magistrate shall decide whether or not charges having to do with intimidation, picketting, etc., should be tried on indictment or on summary conviction. The Committee decided that the Bill should be opposed. It was considered that the offences which this clause covered were of a peculiar nature, and the simpler the procedure was made the better it would be to all parties concerned: that it was not in the interests of either party that such litigation should be of a protracted nature. If the Act was left as at present no great harm could be done before next Session. As it stood it was acceptable to the employer and should also be acceptable to the employee.

The Assistant Secretary reported that although Bill No. 67 had been introduced too late to reach the Senate, the Labor Unions had been successful in attaching the same amendment to the Trading Stamp Bill. This amendment was not heard of till the

last day the Senate was in session. The Trading Stamp Legislation was of a very popular but also troublesome nature, and the Government decided to force it through the Senate without changing a single word in order to prevent the House of Commons from discussing the whole question when it was returned to them. For this reason it was impossible to have the clause referred to struck out and consequently the Criminal Code has been amended as outlined above.

RAILWAY AND TRANSPORTATION COMMITTEE.

The following is a summary of the matters dealt with by the Committee and Transportation Department during the month:—

Telfer Bros.' Complaint.—This complaint, which has been before the Committee for some time, involved the question of rates on general merchandise from Collingwood to points on the Canadian Pacific Railway west of North Bay, the rates from this point being higher than those in effect from Toronto or Hamilton, although the distance is not so great. Our complaint to the Board of Railway Commissioners has resulted in the reduction of rates from Collingwood and vicinity to the Toronto basis, and we are informed that the railways are now at work upon a general revision of their merchandise class tariffs to this territory from all Ontario points.

Oiled Clothing Rates.—The Manager of Transportation reports that the railways have now published in their tariffs the car load rates on oiled clothing, in accordance with order of the Board of Railway Commissioners, issued last year.

Classification.—The Department is in receipt of advice from the Secretary of the Canadian Freight Association that our request for reduction in classification of combined iron and wooden bridges car loads from fifth to sixth class; and on camp stoves with cast iron ends in less than car loads from first and a half to second class; have been granted and will be included in the next supplement to classification.

Classification Rules.—So far the railways have not made reply to the complaint filed with the Board of Railway Commissioners in May respecting the rules of the Canadian Freight Classification No. 12. A communication has been received from the Chairman of the Advisory Committee of the Canadian Freight Association suggesting that the matters referred to be discussed by the Manager of Transportation and the members of the Advisory Committee before being heard by the Board of Railway Commissioners. It has been decided to accept this suggestion.

Classification of Vehicles.—On behalf of the Carriage Section application has been made to the Classification Committee for certain changes in the method of classifying vehicles for shipment. This matter is now the subject of correspondence between the Department and the Classification Committee.

Through Bills of Lading to the Yukon.—Complaint was made to the Department by interested members that they were unable to secure from Canadian railways through bills of lading covering their shipments to the Yukon Territory. This matter was taken in hand with the President of the White Pass and Yukon Route and also with the officials of the Canadian Pacific Railway, and as a result the latter have now advised that they are prepared on application to grant through bills of lading to the Yukon Territory where desired by the shippers.

British Columbia Cedar Case.—Since our last report this matter has been the subject of correspondence between the British Columbia cedar manufacturers and the Fourth Vice-President of the Canadian Pacific Railway. A suggestion was made by the latter gentleman that the order of the Board of Railway Commissioners requiring the removal of discrimination be held in abeyance pending negotiation between the interested shippers and the railway looking to amicable adjustment of the difficulties. This suggestion was accepted by the lumber and shingle manufacturers and the Board of Railway Commissioners requested to withhold action pending negotiations. A communication is in hand from the Secretary of the Board agreeing to this suggestion and intimating that the Board will visit British Columbia

in September; and hopes then to gather such information as will enable it to deal with the whole matter in a satisfactory manner, if the railway company will not agree to a course which will meet the interests involved.

Railway Traffic Forms and Contracts.—The Department has now completed its investigations respecting this matter and is awaiting a conference to be called by the Board of Railway Commissioners for a discussion of the subject.

Halifax Export Rates.—A communication was received from the Halifax Board of Trade requesting the assistance of the Transportation Department of the Association in their endeavor to secure New York basis of rates on traffic shipped to Halifax for export. The matter is now under consideration.

Demurrage.—The reorganization of the Car Service Association has commenced. Mr. J. E. Duval, Chief Inspector of the Railway Commission has been appointed Manager of the Car Service Bureau and the interested railways are to meet next week for the purpose of revising the car service rules, after which revised rules are expected to be submitted to the Board of Railway Commissioners and to this Association before being adopted.

MONTREAL BRANCH.

Two meetings of the Executive Committee of the Montreal Branch were held during the past month. The first was called on June 19th to prepare a report for the Parliamentary Committee upon the present telephone service as affecting Montreal. The opinion was expressed that the local rates were quite reasonable. It was felt that the charges made for long distance service were largely a business proposition, as any one who is dissatisfied with the telephone could resort to the telegraph. The quality of the service rendered was stated to be satisfactory.

So far as inter-communication with rural districts was concerned, there had been no inconvenience reported to the Committee. The Committee expressed itself in favor of private enterprise for all telephone business in the country, as under present conditions the Governments have, for the protection of the public, supervision over the rates charged by the several companies.

The regular monthly meeting was held on July 13th with the Chairman, Mr. J. J. McGill, presiding. There were also present: Messrs. J. S. N. Dougall, Geo. Esplin, Robt. Gardner, D. Lorne McGibbon, S. W. Ewing, J. H. Birks and Clarence F. Smith.

Arrangements were made for the annual meeting of the Montreal Branch on August 24th. A secret ballot will be used in connection with the annual elections. The Secretary reported in regard to a number of measures adopted to equip the Montreal office with works of reference, reports and other sources of information for the use of members. Among the latest additions were files of the Canadian Patent Office Record, and the United States Consular and Trade and Navigation Reports.

It was decided to offer a dinner to Mr. W. K. George, President of the Canadian Manufacturers' Association, on the return of the British Excursion Party, and the arrangements were left in the hands of a special Committee.

Paint and Varnish Section.

A meeting of the Montreal Linseed Oil, White Lead, Paint and Varnish Section of the Canadian Manufacturers' Association was held on July 10th, to consider the situation created by the new Customs duty on Dry White Lead and White Lead Paint. A letter was forwarded to Hon. W. S. Fielding asking on behalf of the Paint Manufacturers, that Dry White Lead contracted for prior to the bringing down of the Budget, be admitted at the former tariff if shipped before a given date, say 15th October. Attention was also drawn to the danger of English White Lead in Oil being imported under the Preferential, as the new duty made only a difference of 3½% between Dry Lead and White Paint. This letter was laid before Hon. W. S. Fielding by the Montreal Secretary.

Adulterated Maple Syrup.

The Montreal Secretary in company with two members of the Branch had an interview with Hon. L. P. Brodeur at Ottawa, on

July 12th, in reference to the Maple Syrup industry, and the enforcement of the present Adulteration Act.

Mr. Brodeur stated that the Government had no intention of introducing any new legislation in the matter at present, but in all probability the Adulteration Act would be more strictly enforced. Manufacturers of Maple Syrup employing cane sugar or other substances in their goods, would be obliged to put in large letters the word "COMPOUND" on their cans.

TORONTO BRANCH.

The regular monthly meeting of the Toronto Branch was held on Thursday, July 13. There were present Messrs. R. A. Donald, Chairman, J. P. Murray, W. P. Gundy, W. B. Tindall, Jno. S. McKinnon, P. W. Ellis, S. R. Hart, J. W. Cowan and E. J. Freyseng. Different matters were dealt with as follows:—

British Coal.

An analysis of several different samples of coal that had been sent some time ago by the Branch to Great Britain was received. The Secretary was asked to ascertain whether or not the results warranted British manufacturers to look further into this market.

Extension of Branch.

After careful enquiries it was decided to recommend to the Executive Council that it was not deemed advisable to incorporate the members of the Association near Toronto in with the Toronto Branch at the present time.

Canadian Telephone Systems.

A letter, forwarded to the Branch by the Parliamentary Committee, from Sir William Mulock, was considered and the following recommendations were made:—

(1) That municipalities should have an absolute right to control the placing of wires within the municipality.

(2) That the trunk telephone lines should be owned by the Government.

(3) That all citizens resident in a municipality in which any company have established a telephone system and who are prepared to pay for services, should be provided with a telephone at whatever rate is established, and the same rate should apply to all.

(4) That all telephone companies should have equal rights in all railway stations.

Exemption of Machinery from Taxes.

The Secretary reported that the By-law exempting machinery from taxes was passed by the City Council on June 26th, 1905.

Twelve applications for membership were approved of.

Annual Meeting of the Branch.

Thursday, August 12th, was fixed as the date for the annual meeting of the Branch. It was decided to ask the members to make nominations for the different offices. Before the meeting a ballot will be submitted to all the Toronto members, in order to have a general expression of opinion.

For the first time since it began operations the rail mill of the Dominion Iron Steel Co. was on the 25th of last month put on double shift, and in consequence its output will now be about double. The rod and blooming mills are also on double shift and the entire plant is a scene of great activity. Shipments of rails and rods are made daily to Quebec and Ontario markets.

The London Machine Tool Co. have sold the plant they now occupy in London, Ont., and by January of the coming year will be installed in new premises in Hamilton. The company has acquired eight acres of land near the Deering Company's works, where they will at once commence the erection of a fine new plant. The machinery, like the buildings, will be new throughout and of the latest and most improved types.

NEW MEMBERS.

Buckingham, Que.

THE ELECTRIC REDUCTION CO., LTD., Chemicals.

Dunnville, Ont.

COUPE MANUFACTURING CO., LTD., Knitted Goods.

Frankford, Ont.

FRANKFORD CANNING AND PACKING CO., LTD., Canned Fruits and Vegetables.

Hamilton, Ont.

THE HAMILTON BRASS MFG. CO., LTD., Brass Goods.

London, Ont.

THE CANADIAN FIRE ENGINE CO., LTD., Fire Engines, Chemical and Fire Equipment.

Montreal, Que.

DOMINION TEXTILE CO., Cotton Goods.

THE G. A. HOLLAND & SON CO., Baskets and Lacrosse Sticks.
T. A. TRENHOLME, Lumber.

Murray Harbor South, P.E.I.

PROWSE & SONS, Bacon and Potato Farina. Packer of Canned Lobsters.

Palmerston, Ont.

JOSEPH O'MARA, Hams, Bacon, Lard, Sausage, etc.

Toronto, Ont.

THE ARMAC PRESS, Printing and Bookbinding.

THE BRADFORD GAS CO., LTD., Acetylene Gas.

THE BRYANT PRESS, LTD., Printers and Publishers.

CANADA BRASS ROLLING MILLS, LTD., Sheet Brass and Copper.

YOUNG BROS., Fancy Goods.

H. B. JOHNSTON & CO., Sheepskin Tanners.

THE MENZIE WALL PAPER CO., LTD., Wall Paper.

TORONTO WOOLLEN MACHINERY, LTD., Textile Machinery.

Winnipeg, Man.

THE W. J. BOYD CANDY CO., Candy.

G. W. MURRAY, Sash, Doors and Office Fittings.

COST ACCOUNTING.

Editor INDUSTRIAL CANADA.

Dear Sir,—In your July issue, you report my address to the Hamilton Manufacturers and I notice that it is rather misleading at the end.

The details of Profit and Loss Account and Balance Sheet have got mixed and all appear under Profit and Loss.

In this paragraph the sentence "The balance between the two sides will represent either profit or loss, but generally in this business, profit." should end it, and a new paragraph should read: "We now come to the Balance Sheet which shows the Capital Assets, Accounts Receivable, etc."

I should be glad if you would correct this in your next issue, as it must have been misleading to your readers.

Yours truly,

Sinclair G. Richardson.

Traders Bank Building, Hamilton, July 25th, 1905.

A HINT TO LUMBERMEN.

Mr. G. Eustache Burke, Canadian commercial agent in Jamaica, writes to the Trade and Commerce department urging lumbermen in Canada to try to catch the orders for orange and pineapple box shooks, which are needed in great quantities in the southern island. In two months the orange season will be in full swing and the demand will be very active. So far the United States shippers have been able to place their goods almost exclusively.

CHANCE FOR CANADIAN FLOUR MILLERS.

Mr. A. W. Donly, Government Commercial Agent to Mexico, in a recent report enumerates a number of Canadian products for which there is a ready market in that republic. Among those especially mentioned are malt, wood pulp, lumber and flour. Speaking of the Mexican wheat crop for this season Mr. Donly says:—

"At the time of writing my last report the press, and public generally, were predicting for Mexico a banner wheat crop. It now transpires that these reports were based on some incorrect information, supplied from sources whose interest it was to conceal the real truth, viz., that instead of being even a good crop, the yield will fall some 33 per cent. below an average year. The slight drop in price, consequent on the beginning of the harvesting of what was predicted would be a large yield, has already undergone a reaction to the extent of raising the price to more than \$1.50 (gold) per bushel of 60 pounds.

"In consequence the farmers are holding for a still further advance, with the effect of placing the millers in the position of having little or no grain to grind. To meet this condition the Executive, making use of the authority vested in it by Congress on a previous occasion of like nature, has decreed a reduction of the duty from five cents per kilogram, or about seventy-five cents gold, per bushel, to one and one-half cents per kilogram, or about twenty-three cents per bushel. This reduction in duties will, with wheat at its present price in the North, have the effect of reducing its price to about \$1.40 per bushel.

"The decree reads as follows: 'Wheat imported through the custom-houses of the Republic from this date (June 27) until August 31 next, inclusive, will be subject to a duty of one peso and fifty cents per 100 kilograms, gross weight.' There will undoubtedly be a large amount of the staple imported from the United States during the next two months. Whether or not Canadian dealers might, with the transportation facilities at their disposal, make a bid for a part of this trade, is a matter for them to determine. It will rest entirely with the Executive as to whether or not the time limit for these importations shall be extended. Should the situation not be sufficiently relieved by that date there is every reason to suppose it might be. In this case Canadian exporters should certainly find themselves in a good position to command a large proportion of this trade. On account of the all-rail haul and high freight rates the only wheat that can be brought here from the United States is from Colorado, Kansas, Oklahoma and districts not farther distant. Canada would be favored with an all-water route and a superior grade of grain to any produced as far south as the points mentioned."

A meeting of prominent Canadian business men and politicians was shortly ago held in Ottawa to consider the formation of a cold storage and transportation company with a capital stock of \$5,000,000. The projector is R. J. Cochrane, son of E. C. Cochrane, M.P. for East Northumberland. Mr. Cochrane has spent some years in investigating the question, and is thoroughly posted in all its details. Closely associated with him are D. Derbyshire, M.P.; A. F. Maclaren, M.P.; Edward Kidd, ex-M.P.; and Dr. Chisholm, M.P. One of the strongest supporters of the scheme is J. E. Armstrong, M.P., whose recent speech on the question in the House of Commons created such a good impression. The company will seek the right to carry on business of a general cold storage and transportation company, to establish cold storage plants at all points deemed expedient. In addition it will endeavor to secure the right to build and operate steamships, to construct refrigerator cars for use on any railway, and the right to acquire at any time any existing company doing similar business. The company will introduce the most up-to-date cold storage system for the transportation of the farm products of the country. Cold storage plants will be erected at various receiving points throughout Canada and also at British ports. The company will seek to establish a continuous chain of cold storage between the producer and the consumer.

THE METRIC SYSTEM AND ITS CLAIMS.

By NATHAN F. DUPUIS, M.A., F.B.S., F.R.S.C.,
Professor of Mathematics and Mechanism, Queen's University.

THE discussion carried on in recent times concerning the demands and merits of the metric system of weights and measures, if it has done nothing else, has added two new words to our English vocabulary, viz.: metricist and non-metricist. The metricist is a person who not only believes for himself in the absolute superiority of the metric system of weights and measures over every other system which has ever been devised, but is also ready and anxious to force his system, by law if necessary, upon every other person whether seeing matters from his point of view or not. The metricist is usually some kind of a scientific person, and he speaks of his system as being scientific and the only scientific system that has ever been in use, although what exactly he means by these expressions is not so easy to determine. He marshalls his arguments in order and occasionally indulges in somewhat peculiar flights of fancy in order to support his contentions, but he usually fails to perceive that it is just possible that his arguments may not always be as sound as he thinks they are, and that what might serve his own purposes very well indeed, might not be altogether without objections to people engaged in other and different callings.

But let us consider some of the features which characterize the much vaunted system of the metricist, and see, by comparing them with the old and long-established English system, what validity or defect there may be in the merits of the metric claims. And first let us take the standard unit-length, as upon this must all the other units ultimately depend.

Standards of Length.

Everyone is probably aware that the universe gives us no absolute standard of length, for no two given points in the universe are at an invariable distance from one another. Hence theoretically speaking no one unit of length can have any advantage over another. Theoretically the inch is not superior to the metre, nor is the metre superior to the inch, and if mankind had to begin life and civilization *de novo* it would be quite immaterial what length he adopted as his unit. But practically the inch is very much superior to the metre, as a unit, because it (the inch) has been long established and employed by the most civilized people in the world, and it has thus become an integral part of all the results of human work and thought extending over hundreds of years of the world's past history. To start in now with a new unit would be to render these results, if in cases not altogether useless, at least much less useful and available for reference than they are at present, and with the original inch as unit.

It will not do to say that results given in inches are easily reduced to equivalent results expressed in metres, for the metre is not commensurable with the inch, and as a consequence the reduction is in general a decimal one of several figures which is not altogether easy. It may seem very strange that a body of men presumably scientific should, in devising a new and standard unit of length, adopt one which has no simple relation to any unit used by any people in the world either at present or in the past, and which does not represent accurately any particular thing with which we are acquainted in the heavens or the earth or in the waters under the earth. But the strangeness somewhat passes away when we remember that the metre, together with all its belongings, is the child and offspring of Anarchy and Rebellion. We may understand then how the metre came to be what it is, a sort of Ishmael amongst units of measure, opposed to every other unit in the world, somewhat as its authors were opposed to everything which savored of law and order.

Difficulties in Expressing Fractions.

The metricist says that his system is a decimal one and that where calculations are concerned the decimal system has an ad-

vantage over all others. The non-metricist admits that where pure computation is concerned, multiplications and divisions for example, the decimal arrangement is, on account of our decimal system of notation, of special advantage. But he does not admit that the decimal arrangement of measures is under all cases the most advantageous, or that mere facility of computation is always the chief thing to be desired. Some consideration is certainly due to the ability to express fractional parts of the unit. But with a decimal system only the half, the fifth and the tenth can be expressed with any simplicity, the quarter and the eighth being more complex in their expression, while the third and the sixth cannot be accurately expressed at all. In practical life, however, the fifth and the tenth are scarcely ever required, while the most important divisions of the unit are the half, the quarter, the third, the sixth and the eighth. Surely the metricist can see that because nature happened to give us ten fingers it does not follow that everything else must go by tens; and a very little observation upon the number-systems most prominent in nature will convince one that ten is by no means a very common system. Nevertheless, in the face of this, one metricist, at least, is so convinced of the importance of the decimal system that he looks forward to the time when Angle and even Time shall fall under its sway. What a pity it is that he cannot change the number of days in a year, or the number of days in a lunation, or the number of moons in a year, so as to have them answer to his decimal proclivities. The fact is that some things, and especially where the unit is required to be divided into three equal parts, cannot be dealt with simply and effectively by a decimal division.

Its Application to Angles.

Thus we have a natural unit of angle, namely, that angle which is described by a line which makes one complete revolution in the plane and returns to its former position. To divide this unit-angle into ten parts would be silly, as it would give us for one of the parts an angle of no particular importance; whereas the division into two, four, and six parts gives us three of the most important angles which enter into the mathematics of the universe. The division proposed by the French revolutionists, by the authors of the metric system, the division of the right angle into 100 equal parts, has fallen completely out of use the world over, and principally for two reasons, first, it fails to give the angle of an equilateral triangle, that angle which in physical investigations is next in importance to the right angle, and, second, it renders difficult of usage all the elaborate tables of trigonometric functions which have involved so much time and skill in their production. Of course, if we see fit to throw away the greater part of what has been already done and commence anew it would be quite possible to calculate tables to the hundredth part of a right angle and its decimal divisions; but that such a course would not be profitable is evidenced by the fact that as matters stand at present every third degree of the quadrant, i.e., 3°, 6°, 9°, etc., up to the right angle, can have all its trigonometric functions given accurately by such expressions, a very important matter in verifying calculations, while this property would be completely lost in the case of a decimal division of the quadrant. And as from their astronomical connection the division of time must go along with and conform to that of angle, there does not appear to be any immediate prospect of counting time according to the metric system.

It need not here be more than stated that a duodecimal system of notation would avoid all these difficulties, and that those duodecimal divisions which we still retain in our English system were not adopted without good reasons; but more of this hereafter.

Our Money System is Decimal But Not Metric.

The metricist is fond of referring to our money system in illustration of the advantages belonging to a decimal division of the unit, and hence to the general metric system. In fact he is disposed to look upon the American money system as a part of the metric system.

In doing this he is too prone to point out the similarities, while ignoring the differences between the two cases. The unit of length has a necessary relation to the units of area, and volume and capacity, and indirectly to the units of weight, and many other things dependent thereon, and in very many cases pure computation does not enter to any particular extent into their uses and applications. Our money system, on the contrary, has no relation to any other system whatever, and though its divisions are decimal, it does not form a part of the metric system, and the most of the operations carried out with respect to it are more or less of the nature of pure computation.

To make the American money system correspond to the metric one, would require several peculiar changes. Thus, if we take the dollar as the unit, we should call the subdivisions by the names of deci-dollar, centi-dollar, and mille-dollar, while the eagle would become a deka-dollar, a very beautiful jargon certainly. Or if we take the cent as the unit, we should have the deci-cent, the deka-cent, the hecto-cent and the kilo-cent to make music in our ears.

In fact, whoever invented the present American division of money was wiser than the authors of the metric system. For, while making it correspond with our decimal notation, he judiciously avoids the fixing of any particular unit, and gives short and distinct names: mill, cent, dime, dollar, to his several starting points. And the metricist, if he expects his system to ever prove acceptable to the majority of reasonable people, should do likewise, for such uncouth terms as decimetre and dekametre, centimetre and hectometre, millimetre and kilometre, are, to say the least, abominable, and altogether unfit for common use.

Again, the users of money soon discovered that there were too many ostensible units, and accordingly the *dime* and *eagle* have been practically dropped. Thus we do not say three dimes and seven cents, but thirty-seven cents; and large amounts of money are counted not in eagles but in dollars. The metricist has apparently discovered the same fault in his own system, for one never expresses the reading of the barometer, for instance, as 7 decimetres, 6 centimetres and 4 millimetres, but as 764 millimetres. And as measures under the metre are usually expressed in millimetres, the system would be much improved by making a millimetre a unit and calling it by some distinct monosyllabic name.

Erroneous Contentions.

Again, some of the metricists, not content to rest upon the merits of their own system, decry the normal English system by referring to its large number of connecting units, and instancing among its units of measure such terms as hand, cubit, fathom, etc. Now this is silly. For not one of these properly belongs to or is a necessary part of the British system of length measures. They are local and technical terms, and no law short of absolute tyranny will ever prevent people from measuring by hands and paces, and finger's lengths, and arm's lengths, etc., since these are conveniences arising out of the fact that every person carries perpetually about with him his approximate standards. Moreover, even in France, the home of the metre and the metric system, numerous convenient unit-measures of like kind are to be found in country places and in use amongst the common people, and it is idle to think of stopping this sort of thing by legislation.

But the metricist is aware that, if left to its merits solely, the metric system would never be adopted spontaneously by any people, and especially by the English-speaking people, and so he looks hopefully to the mediæval and intolerant method of compelling the people, by stringent legislation, to do as he does and look at matters from his point of view, for strong efforts have

been made in both Britain and America to make the metric system the only legal one.

By all means let people who wish to use the metric system in their particular pursuits, do so. But at the same time accord to others the inalienable right of employing that system in which their predecessors worked and recorded the results of their labors and transmitted them to the present generation, and have some respect for the commercial and manufacturing interests of the country, every one of which would suffer by a compulsory change to the metric or any other system which severs them from the records of the past.

The metricist is fond of dwelling upon the great, and we are disposed to say imaginary, loss of time experienced by the school-boy in getting up and committing to memory the multiplicity of the connecting ratios to be found in the English system. And because this waste is imaginary rather than real, he is apt to be very wild in his statements. He forgets that education does not consist in learning a lot of uncouth names because they are connected together by a simple ratio and compounded from Latin and Greek derivatives, but in the mastering of principals so as to understand and be able to apply them. And that anything that calls the mind into active and practical exercise is not lost as a means of education.

As it is a dictum with linguists that to understand one's own language he must, to a greater or less extent understand some other language, so it is a dictum with arithmeticians that no one can really and fully understand the decimal system of notation until he has mastered some other system, and in every sufficient course in arithmetic an acquaintance with the general principles of a system of notation is required as well as a complete mastery of the decimal one.

And then we have a lot of talk about how easy it would be to change from our English system to the metric one, as if the only thing necessary were to have it taught to the children in the schools for a few years. That this is not true must appear to any person who reflects that all the older people, those who have passed out of the schools, know only the older system, and that while they must be spoken to in their own language, they are not easily leavened by new ideas or won over to new-fangled notions by school boys and girls. And experience in those countries in which the metric system has been compulsory for several successive generations, shows that even that has not been sufficient to totally eradicate the older ideas from the land.

Superiority of the English System.

From what has been said it appears that the metric system is not the perfect thing of beauty and the joy forever which its friends would make it out to be.

It is faulty in the value of its unit; and the adoption of a unit foreign to all old established units, and those especially in which the world's best work had been done, was a foolish act to begin with, and all that the metricist can say and do cannot make it otherwise.

The metric system is faulty in being so framed as to have but one unit-length, the metre, and all the other units as derivatives from this, and necessarily subservient to it from the very nature of the nomenclature employed.

The English system is superior in the fact that any one of its units, the inch, or the foot, or the mile, may be taken as the original unit-length, and all the others be made dependent upon it, as circumstances of expression may require. And this is a decided advantage.

The metric system is faulty in its nomenclature. The constant repetition of long and uncouth four-syllable words compounded from Latin and Greek roots, and not always easily comprehended, and often not clearly distinguished, as for example millimetre and kilometre, is in strange contrast to the English system with its monosyllabic terms, and that sharp distinction in sound and form which makes it impossible to mistake one for

(Concluded on page 33.)

Transportation Department

INTERCHANGE SWITCHING.

Interswitching between railways at terminal points is a matter now engaging the attention of the Board of Railway Commissioners. Under the Railway Act of 1903, railway companies are required, according to their powers, to afford all reasonable and proper facilities for the interchange of traffic between their respective railways.

Applications from London and Lindsay.

An application has been made for interchange facilities necessitating the construction of a connecting track between the Grand Trunk and Canadian Pacific Railways at London. The Board has also before it a similar application in connection with interswitching facilities at Lindsay.

Railway Objection.

It appears that in the London case, objection is made by the Grand Trunk on the ground that it has provided at considerable expense, facilities which enable direct connection with about fifty industries at that point, and that it would be unfair to require it to give other and competitive railway companies access to these terminals. In considering this objection, it should be borne in mind that the railway with the terminal facilities at London has been heavily bonused by the municipality, secured its right to expropriate property and construct tracks along and across public highways from the people, and in many instances before constructing side tracks to the various industries required the owners to pay the cost of constructing such sidings. So that while undoubtedly the railway has been at some expense in providing facilities, the people who are benefited thereby have also borne their full share of the burden.

Interswitching a Necessity.

Facilities for the free interchange of traffic between railways at connecting points, are to-day a public necessity. Manufacturing establishments located on one line of railway are frequently prevented by the absence of relative or reasonable through rates from marketing their products at points not reached by that railway; and in securing supplies, their purchases are restricted in the same manner. If there is interswitching, goods can be shipped or received direct by either railway from and to the factory siding. Or when cars are short on one railway line, or traffic is interrupted through congestion or otherwise, the shipper is in a position to take advantage of the facilities afforded by the competitive line and thus send his goods forward without delay.

Nor is the question entirely a local one. Each connection of this kind between railways, provides a shorter through line for traffic passing from one railway to the other, and in this way shippers and receivers at distant points are enabled to secure by the shorter continuous route a reduction in through freight tolls.

Industrial Development Hampered.

The absence of interswitching facilities also tends to hamper industrial development in particular localities by reason of the fact that manufacturers seeking location are disinclined to go where their operations will be restricted by siding connection with only one line of railway.

Law Should Provide.

Undoubtedly the people who gave to one railway the right to locate terminals and side tracks, should be in a position to secure the benefit of additional shipping facilities afforded by connection with another railway without necessitating a duplication of tracks and sidings, to say nothing of the expense and public inconvenience involved. The railways should be required by law to provide interswitching facilities at all competitive points unless physical obstacles render this impossible, and where there are no connecting tracks the law should require the constructing of a

spur line if the railways come within reasonable distance of each other. The one question to be carefully determined is the amount of compensation to be paid for the use of side tracks and terminal facilities by companies who are given access to same.

Discrimination.

The discriminatory nature of the present position of railways should not be overlooked. At Montreal, Peterboro', Toronto, Hamilton, Brantford, Woodstock, St. Thomas, Chatham, Windsor and other points, the railways have agreements which provide for the mutual transfer of cars and interchange of traffic for the benefit of themselves and the public. If they refuse to provide similar arrangements at points like London, Guelph, Galt and Lindsay, they subject shippers and manufacturers at these points to undue prejudice and disadvantage when meeting competition from those who are located at points where these facilities are available. This is one of the very things that the Railway Act was designed to overcome.

FREIGHT OVERCHARGES.

Overcharges by railways continue to be a source of annoyance and difficulty to the shipping public. From all parts of the country complaints are received of overcharges in freight accounts and vexatious delays in adjustment of claims for refund.

Cause of Overcharges.

The amount of money collected in this way by railway companies and wrongfully withheld from the shippers and receivers to whom it belongs, pending investigation by railway freight claims departments, must annually amount to a very considerable sum. The injustice of overcharges lies mainly in the fact that if the railway companies' tariff, accounting and auditing departments were brought into a state of efficiency, in the majority of cases the overcharge would not occur. The causes, generally speaking, are the misrouting of freight, lack of knowledge on the part of railway agents of the proper rate or classification, misunderstanding of rules respecting minimum weights, incorrect statements of weights, errors in extension of charges on waybills, failure of agents at destination to check and correct errors in waybills.

Complex Tariffs.

The most serious delays in settlement of claims occur where the freight is transported over two or more railways involving the necessary transfer at junction points, and it usually also happens that these claims cover the heaviest overcharges. Railway companies are now required to publish and file with the Board of Railway Commissioners their classifications and tariffs covering all freight tolls, both for local shipments and to and from points on connecting lines. It would seem, therefore, to be a simple matter to determine in any case the lawful freight charge. But simplicity and clearness are conspicuous by their absence from railway freight classifications and tariffs. Schedules covering group rates and joint rates particularly, are compiled in such a way as to make them intelligible only to the traffic expert. Frequently the regular tariff is superseded by a special tariff which does not contain rates, but directs that the rate is to be in accordance with a third-mentioned schedule, and sometimes additions or deductions are to be made before the actual figures are arrived at. For instance, the rate on cornmeal from Chatham, Ont., to Halifax, N.S., is given in the regular tariff applicable upon grain products, but a special commodity tariff directs that cornmeal is to be taken as follows:—

"Straight car loads at current Detroit rates if lower than published rates (on cornmeal) from shipping station, but not less than rates named above on corn."

Thus a third schedule, the Detroit tariff, must be consulted and compared with certain special commodity rates on corn shown in the second tariff, before the rate on cornmeal from Chatham is obtained. In other cases, more than three separate tariffs must be consulted before the rate is definitely ascertained.

Frequently the joint tariffs do not clearly specify the route over which they apply, and in consequence the shipment is wrongfully waybilled by agents over a route by which the railway has not in force division arrangements with connecting carriers for the protection of the tariff. This results in overcharge which has to be adjusted by the interested carriers, involving extended correspondence and negotiation. The present method of compiling freight tariffs is not attributable to any desire on the part of railways to make the work of ascertaining rates a matter of difficulty. It results, generally, from keeping down the cost of operating tariff departments at the expense of efficiency.

Overcharges in Weight.

Overcharges in weight are nearly always found to occur in the shipment of carload lots which are weighed upon track scales by railway companies. Among the causes assigned are, incorrect tare being stencilled upon the car, cars being put over the track scale in train lengths, without uncoupling during process of weighing, the result being that if the car next in the string is higher or lower, it usually happens that the weight recorded upon the scale is not correct; or shunting cars across track scales at such a rate of speed as to make accurate weighing impossible. When shipments travel over several lines of railway and are weighed by each separate line in transit, the freight account rendered the consignee at the point of destination is usually made upon the highest weight ascertained by any of the scales.

Long Standing Grievance.

The matter of delay in adjusting freight claims has been the subject of complaint to every Railway Commission. In some of the United States, the Commissioners have organized departments which pay particular regard to the adjustment of freight claims. In every case where these departments have been put in operation, they have resulted in effecting prompt adjustment of long outstanding freight claims reported to them. In one case, as a result of an investigation, an interested railway issued authority to its agents to settle on presentation, claims for a reduction in freight rates, to the basis of the published or current tariff rates and classification; and in addition, appointed traveling inspectors who went over the line station by station, adjusting all proper claims which were outstanding under the previous practice. The railway reported the result of this station to station canvass as gratifying, both to the shippers and to the railway.

The matter of freight claims was one of the first subjects brought to the attention of the Board of Railway Commissioners for Canada, and as a result of the number of complaints made by individual shippers and associations, the railways undertook to effect an improvement in their methods of adjusting freight claims. Doubtless some improvements have been introduced, but the general result is still far from satisfactory.

Improvement Suggested.

There is no good reason why an overcharge in freight rate should not be adjusted by the railway agent at the point of destination, when his attention is called to it. The railway companies clothe their agents with authority to correct freight bills when there is an undercharge, and if these representatives can be trusted to apply the proper rate or weight in the case of undercharges, why should they not be competent to protect the railway company's interests also when adjusting an overcharge, especially as freight rates are now supposed in every case to be properly covered by published tariffs and posted for public information. Shippers and consignees are not interested in the internal adjustment of claims or accounts between railways and should not be required to leave large amounts outstanding while the railways leisurely proceed with an investigation and adjustment between themselves.

At a recent meeting of the Association of American Railway Accounting Officers, this matter was given consideration. A paper was read on the subject of minimizing overcharge freight claims, in which the writer pointed out that such claims were on the increase and expressed the belief that 90% of overcharges were a distinct reflection on the accounting department of the railway lines. It was admitted that the greater proportion of these claims resulted from errors on the part of railway agents, which could be corrected if railway way bills were subjected to prompt revision in audit offices, and where overcharges were found to exist, instructions sent to the railway agent to make immediate refund. A plan was suggested for effecting prompt refund of overcharges where several carriers were interested. The matter was also referred to in a communication from the General Auditor of the Grand Trunk Railway, who cited numerous instances of unnecessary delays in the adjustment of freight claims between connecting railways. The following resolution was reported and adopted by the convention:—

"RESOLVED, that the members of this Association are requested to bring to the attention of their respective executive officers the present excessive delay in the handling of freight claims, and to urge the improvement of the claims departments by authorizing the employment of more help when needed."

Last month a meeting of the representatives of the claims departments of Texan railways was held in accordance with an order from the General Managers, for the purpose of devising ways and means to facilitate the adjustment of freight claims, and to prevent prejudice arising out of delay in payment.

It would seem that at last the railway officials are awakening to the necessity for some effective measures to improve the present unsatisfactory conditions. If the above resolution of the Association of Accounting Officers is complied with by the executive officers of Canadian railways, it will doubtless remove to a considerable extent the injustice to which our shippers are now subjected by reason of the unreasonable and unnecessary delays in settlement of overcharge freight claims.

GREATER HARMONY BETWEEN CAPITAL AND LABOR.

Upon the opening of the 10th Annual Convention of the National Association of Manufacturers of the United States, which took place at Atlanta, Ga., May 16, 17 and 18, the President of the organization congratulated its members, and the members of other co-operating organizations and all individual manufacturers and employers, on the progress—which the industries of the country have unquestionably made with great rapidity—towards a larger freedom in industry, a better understanding of the right and the wrong of the general industrial situation, and a more appropriate harmony as between capital and labor.

Commenting upon the President's reference to labor, *American Industries*, the organ of the National Association, said:

"A larger freedom in industry, a better understanding of the right and the wrong of the general industrial situation, and a more appropriate harmony as between capital and labor, or the employer and the employee, which must become finer and broader all the while, owing to the fact that it is based almost wholly now upon a wholesome respect for the self-respecting employer which the employee needed to feel and is now only too glad to know that he feels. If this, as it unquestionably does, demonstrates the absolute necessity and success of the open shop idea, it also puts upon the employer a burden of responsibility to maintain those relations of mutual respect and friendliness now so nearly restored throughout the land—to which, however, a recognition of great principles, to be supported uncompromisingly to the end, was the first requisite. Surely the employers of the country, with their immense investments and responsibilities, are bound by all considerations of patriotism and good business to wish for a correct and expansive application of this one principle of freedom in industry more than for anything else."

CHEAP COAL AND NATIONAL PROGRESS.

By W. C. MILNER.

What Coal is to Industrial Progress.

THE two great factors of industrial progress are cheap coal and cheap iron contiguous to each other. Franklin placed coal first. He said: "From the great abundance of her coal mines Britain drew most of her riches. Her coal mines were worked in the days of the Romans, but it was not until after the introduction of blast furnaces by Darby in the middle of the eighteenth century that England gained her pre-eminence as a manufacturing country, though smelting by aid of blacksmith's bellows, giving the air blast, was practised by one of the Dudley family nearly a hundred and fifty years before. We, to-day, who are not so sure of the immense importance of cheap coal and cheap iron, will pardon the intellectual density of Englishmen two hundred years ago, who (Gibbins, the author of *Industry in England*, states) "have had hardly an idea of the vast wealth of coal and iron that has placed them in the forefront of Europe as a manufacturing nation." The relationship between the production of coal and iron is well marked in the industrial history of England. An expansion in the iron trade has at all times led to an increase in the coal output. Take as an example the thirty years (1855-84) quoted by the Royal Commission on Trade (1886) as to the production of coal and pig iron in Great Britain in million tons by annual averages:—

	Coal.	Pig Iron.
1855-9.....	66	3.5
1860-4.....	85	4.1
1865-9.....	103	4.9
1870-4.....	120	6.4
1875-9.....	133	6.4
1880-4.....	156	8.1

Relation Between Outputs of Coal and Manufactured Goods.

The value of manufactured goods in the United States has increased in almost a direct ratio with the output of coal and iron ore. The following figures represent the production of coal, iron and steel in millions of tons, and of manufactured goods in billions of dollars:—

	Coal.	Iron and Steel.	Manufactured Goods.
1850.....	3	.5	1.
1860.....	8	1	1.8
1870.....	33	2	4.2
1880.....	64	5	5.3
1890.....	141	13	9.3
1900.....	242	24	13.

The dependence of manufacturing industries on cheap coal and cheap iron is no new doctrine. It was fully thrashed out at the sessions of the Board of Trade of Canada in 1877 and 1878, on the eve of the adoption of the National Policy. Mr. E. K. Greene, of Montreal, the mover of the Protectionist resolutions argued that "when Providence places coal and iron side by side, it is the basis of national wealth. It means cheap goods. If the area of a coal distribution be increased, the cost will be decreased." Other speakers echoed the same sentiments: the cheap coal and cheap iron of Nova Scotia would develop our domestic industries.

N. S. Coal Miners and Protection.

The coal mine operators asked for protection on other grounds. Their natural markets in New England had been cut off by two causes: first, a heavy duty; second, the determined hostility of the Pennsylvania Railway, the N. Y., N. H. & H. Railway, and the Boston & Maine, either in rates or drawbacks, the effect of which, according to the evidence of the manager of

the Cow Bay Mines (Mr. Belloni), was to render the price 75c. cheaper in Philadelphia than in Boston. They presented a petition which amongst other things stated:—

"We do not ask for protection, though there are many who would respond to our appeal on that ground in this case; we simply ask that American protectionists should not be enabled to cripple and crush our trade. The prohibiting duty of 75c. has been imposed by Pennsylvania monopolists, not out of hostility to the Dominion, but simply for the purpose of keeping us from competing in their markets. The moment we can make the duty unprofitable to them it will be repealed. We therefore ask, in the interests not of protection, but of free trade, that you request the legislature to neutralize this hostile duty of 75c. by giving an equal bounty on all coal sent to the United States; or else to impose a duty of 50c. on all imported coal."

It was signed by over two hundred persons and firms, amongst them being:—T. D. Archibald, Senator; C. J. Campbell, M.P.; D. McKeen, Agent Caledonian Coal Co.; E. P. Archibald, Chairman Meeting Coal Owners; R. G. Haliburton, Secretary Meeting Coal Owners; S. Napier Robinson, Manager Toronto Coal Mining Co.; S. Cunard & Co.; Cunard & Morrow; John Stairs; Corbett & Co.; Wm. Roach; James Butler & Co.; Pickford & Black; Wm. Chisholm; T. & E. Kenny; Mitchell & Sons.

There can be no reasonable doubt as to the value of the National Policy in developing the coal industry, as the following table shows:—

Coal Sales of Nova Scotia, Before the N. P.

	Tons.
1868.....	453,624
1869.....	511,795
1870.....	568,277
1871.....	596,418
1872.....	785,914
1873.....	811,106
1874.....	759,127
1875.....	706,795
1876.....	634,207
1877.....	697,665
1878.....	693,511

After the N. P.

	Tons.
1879.....	688,020
1880.....	954,659
1881.....	1,035,014
1882.....	1,250,179
1883.....	1,297,523
1884.....	1,261,650
1885.....	1,254,510
1886.....	1,273,666
1887.....	1,519,684
1888.....	1,576,692
1890.....	1,577,107
1891.....	1,849,949
1892.....	1,752,934
1893.....	1,485,914
1894.....	2,019,742
1895.....	1,831,557
1896.....	2,047,013
1897.....	2,013,421
1898.....	2,135,397
1899.....	2,419,137
1900.....	2,997,546

In 1892 the consolidation of the Cape Breton mines under the name of the Dominion Coal Company took place. In the 13 previous years the increase was from 688,000 to 1,752,000 tons, being nearly 150%.

Limits of the Present Market.

The cheapness of transportation from Cape Breton mines to Montreal has given these mines the almost exclusive control of that market, the colliers employed carry four, five, and even six thousand tons, ensuring cheap freight. West of Montreal the conditions suddenly change; barges passing the St. Lawrence Canal do not carry above 1,250 tons. The present rates from Montreal to Kingston are about a dollar per ton. Until the canals are again enlarged, enabling large vessels to pass into the Great Lakes, it seems idle to speculate on cheap water transportation from Montreal west.

The area between the St. Lawrence Canals and the seaboard being under present conditions the limit in Canada of territory that can be possibly supplied with Nova Scotia coal, is inhabited by about 2,000,000 of people. This market is fully supplied with domestic coal, and the question of any expansion in the future of our coal business rests upon obtaining outside markets. The Dominion Coal Company is making efforts in this direction and has been shipping small quantities to the North of Europe and more recently to Mexico.

The National Policy having served its term and fulfilled its purpose in giving our mines our total available home market, the question now arises whether it cannot be safely and advantageously modified in order to give them a profitable outside market and thereby sustain in the future the yearly increase in the output? Cannot the New England market so eagerly coveted in 1878 be advantageously sought in 1905? The conditions have entirely changed in the intervening 27 years, and changed in favor of reciprocity. In 1904 some 35,000 manufacturers and business men in Massachusetts, representing an invested capital of one hundred and fifty million dollars, endorsed the reciprocity movement, and it is daily gaining strength. New England has neither coal nor iron, and unless she can secure cheap raw materials she must resign her industrial supremacy to Ohio and other more favored regions. Nova Scotia coal is at her door and can be delivered at her coast cities at from one-quarter to one-third the freight rate of American coal. Her interests are then altogether with reciprocity in coal, which may lead to the abolition of the duty. Another important change is the attitude of the American railways. Instead of being hostile and giving rebates against our coal, they are users of it and encourage its importation.

Another element is the cheapening of transportation charges by water, owing to the increased size of vessels employed. The freight rates to New England points have decreased about 75%; the freight rates to Boston from Louisburg are about 45c. against \$1.75 to \$2.00 a generation ago.

The National Policy rests upon two broad propositions:—
1st. The importation of raw materials free to cheapen home production. 2nd. The imposition of a duty on manufactured goods sufficiently great to insure the domestic market to the skilled labor and capital of our own country. So far as it is a factor in manufacturing processes, coal classes as a raw material and a duty on it merely enhances the cost of manufacturing and increases the price of goods to the domestic consumer. It is injurious in proportion as it is effective.

The reciprocal removal of the duty on coal will, therefore, while lightening the burden on the manufacturers, cheapen the price of domestic goods. It promises also to give a vastly and enlarged market to the Canadian coal mines without appreciably injuring their sales in the territory they now hold.

CANADIAN FAILURES.

As reported to Bradstreet's, the business failures in Canada for the first six months of 1905 number 674, involving \$7,239,384 of liabilities. This is an increase of 20 per cent. in number as compared with the first half of 1904, and an increase of nearly 40 per cent. in liabilities.

COMMERCIAL TRAVELLERS' TAX.

Exchanges from Great Britain express the unqualified dissatisfaction felt there with the Quebec law imposing a tax on commercial travellers of foreign and British houses having no permanent offices in the Dominion. It is taken to be an act of hostility aimed directly at British interests by the people of Quebec, while the enemies of inter-imperial preference are pointing to it as a new index of the feeling of Canadians generally in reference to trade with the mother country.

The fact is that this law, like the legislation passed some time ago by the local assembly of Prince Edward Island, and lately by the British Columbia House, whereby the commercial travellers of other Dominion provinces are taxed, is decidedly anti-Canadian and seems to have been framed without regard to the broad and well-recognized principles upon which Canadian commerce is and must necessarily continue to be conducted. The Commercial Travellers' Tax law of Prince Edward Island will of course continue in force until the legislators of that Province see fit to remove it, for the time allowance for a Dominion Government veto has long since passed. It is gratifying to know, however, that in the cases of British Columbia and Quebec the Dominion Government will probably take action in due time and that both bills will in all likelihood be repealed.

INAUGURATION OF THE CANADA-MEXICAN SERVICE.

The Canadian-Mexican S.S. Service was inaugurated on the 21st ult. when the Elder-Dempster boat "Angola" sailed from Montreal with a full cargo booked for West Indian and Mexican ports. To celebrate the event some fifty of Montreal's prominent shippers and manufacturers were entertained at a luncheon given by Mr. D. A. Campbell, representative of the company, and some interesting addresses were given by the Hon. A. G. Blair, D. A. Ansell, Mexican Consul-General, and others. In response to a toast to President Diaz, of Mexico, Mr. Ansell referred to the latter's strong desire to have trade developed between Mexico and Canada. He had always been most anxious to cultivate such trade. Mexico could use large quantities of cereals, such as Canada could supply. She could also take all kinds of Canadian produce and manufactured goods. On the other hand, she could in return send to Canada quantities of sugar, hemp, coffee, woods, goat skins, etc. In conclusion the Consul-General hoped that Canadian manufacturers and tradesmen would make use of the new service to build up trade with Mexico, which he assured them would grow with easy cultivation to proportions well worth while.

For Nassau the "Angola" carried 275 barrels of flour, 40 tons of hay and 750 bushels of oats. She has for Havana 800 tons of paving blocks for the Havana Street Railway, 500 tons of hay, 30 tons of paper, 30 tons of peas, 400 packages of Halifax fish and 140,000 feet of lumber. Two hundred tons of hay, 100 parcels of furniture and another hundred tons of general cargo are for Mexican ports.

SUGAR FROM DEMERARA.

The Demerara *Fortnightly Market Report* for the week June 28th, 1905, gives the following statement of exports of sugars:—

	1902	1903	1904	1904 to 28th June	1905 to 27th June
SUGAR, (Tons)					
United Kingdom	18,348	10,591	17,966	3,431	2,511
United States. . .	92,139	68,279	42,131	4,390	5,925
Canada, etc. . . .	10,743	54,046	48,040	25,215	17,303
Total	121,230	132,916	108,137	33,036	25,738

In 1902 Canada, according to these figures, imported 8.86% of the total quantity shipped. This rose in 1903 to 40.66%, and in 1904 to 44.43%, and is still increasing.

Insurance Department

HOW TO REDUCE THE COST OF INSURANCE.

At the annual convention of the National Association of Manufacturers of the United States held at Atlanta, Ga., in May last, the following most important paper from the pen of Mr. Edward Atkinson was read by the Secretary of the Organization. As Mr. Atkinson is admittedly one of the foremost authorities in the world on Fire Insurance, its careful perusal will be found to be of great advantage to all concerned:—

I have been honored by your Executive Committee with the request that I would attend your Convention and give you an address on methods of reducing the cost of fire insurance. I regret that advancing age makes it indiscreet for me to undertake long journeys by rail, and I am therefore obliged to communicate with you through your Secretary and will submit to you the conclusions to which I have been led in the course of my forty (40) years' practice, first as director and for twenty-six years as the administrator of the largest of the Factory Mutual Fire Insurance Companies of New England.

My conclusions may be justified by the fact that during the twelve (12) months ending April 30 the company of which I am president has insured factories and workshops against loss by fire and loss from the breaking or leakage of sprinklers to the value of two hundred and six million dollars (\$206,000,000), with a total loss by fire and water in twelve (12) months of less than thirty-four thousand dollars (\$34,000) paid on more than three hundred and forty (340) claims for single losses.

The companies associated with ours, not in administration but in the executive work of inspection, making plans, laying out pump, hydrant and sprinkler service, and other similar services rendered to our members, have with this Company carried for the twelve months past insurance on property to the value of about fourteen hundred million dollars (\$1,400,000,000) with almost identical and corresponding results, varying but a trifle from our own, in some cases even a little better.

This insured property, in my own and the most conservative of the older companies, consists of certain classes of textile factories, paper mills, machine shops with some wood-working, metal-working, dye works, printeries and bleacheries, and a small miscellaneous class in which the fire hazard is of like kind to that with which we have become familiar in dealing with our principal classes. There are many risks of as good quality in other classes, but we do not expand for the reason that our members are not seeking a profit. They appoint the officers as their agents to save them from loss, and as the amount and diversity of the work is about all that the executive officers and inspectors can suitably cover and control, we refuse all outside hazards that are not of an analogous kind, no matter how safe they have been or might be made. We have nothing to sell. Our expenses are very small, less than four cents on a hundred dollars (\$100) insured, and fully half of that is expended in the service of engineers and experts, making inspections, layouts and plans, and in executing plans which are of the greatest service to our members irrespective of the contract of insurance.

To Prevent Losses by Education.

How, then, can you do it? There is but one way. The owner, builder and occupant of property are the only persons that can prevent loss by fire on their premises. All that the Factory Mutual Underwriters can do is to give owners and agents information and instruction how to prevent loss, and all that the Mutual Companies or the Stock Companies can do in case of loss is to pay a certain sum of money as indemnity, so far as money may compensate for the loss. The executive officers of the Factory Mutual Companies have only been primary

school masters, teaching the alphabet of construction, protection and prevention. Had not the pupils been apt and ready to comprehend their own interest in the matter, the work of the saving which I have disclosed to you could never have been accomplished. It therefore rests with you, the members of this Association, to reduce the cost of insurance on your property, and you only can do it.

If you undertake to organize a mutual company, even in risks that are qualified to become mutual risks, merely for the purpose of getting the lower rate of premium, you will utterly fail. There is no virtue in the name of mutual. All underwriting is mutual. You contribute a premium to the funds of a stock insurance company and your losses and expenses are paid out of your own premiums. The capital is nothing but a guarantee; if the capital is impaired by losses and expenses it must either be made up by the stockholders or the company will be enjoined and put into bankruptcy. And, precisely the same way, the sum deposited with the mutual companies under the name of premium is the only source from which losses and expenses are paid.

What, then, is the first condition precedent to reducing the premiums on fire insurance, which are not yet high enough? It is this: let every man answer to himself, "Is my building constructed as safely as I would construct it were I to insure it myself? Is it protected with apparatus such as I would put in if I were insuring it myself? Is it kept as clean, as free of hazard in occupancy? Is it watched and inspected as it would be by any one of common sense who insured himself?"

Now, unless each one of you representing a large factory or workshop can answer these questions "Yes," you are not yet qualified to become members of a safe mutual company. That is a very extreme statement of a fact subject to very slight variation. There are mills and workshops on which the construction is not quite up to the present standard, but in safeguards and in occupancy these risks are up to the present standard. Moreover, a risk slightly defective in construction, owned and operated by a man whose whole fortune is in it, who lives in it or near it, and is about it all the time, is in some measure a better risk than a large factory building belonging to a distant corporation supervised by an agent who has not that personal interest in it to compel him to exercise the utmost care.

I therefore counsel you not to expect great gain, and I counsel you to go slowly in any effort to organize mutual insurance companies to cover works that are not now qualified to be insured in the Junior Mutuals which are extending their services over risks that the Seniors do not take, and I caution you against any effort to establish a mutual system over risks that are in the congested districts of cities or that are in any considerable measure subject to what is known as the conflagration hazard.

Yet there is an immense field open to you all, by occupying which you may greatly reduce the cost of your insurance and induce the underwriters to grant you lower charges of premiums in recognition of your own duty fulfilled to your own property.

National Advantages to Capital in Saving.

Without any effort to make exact analyses of the losses by fire in the United States, which now average one hundred and fifty million dollars (\$150,000,000) a year, with an occasional large increase from a conflagration, I am satisfied that more than half this loss occurs in large establishments, either for the manufacture or sale of products, in which losses range from fifty thousand (\$50,000) to a million dollars (\$1,000,000) each. I think that less than half the cost of the annual ash heap occurs in the much greater number of small claims. That fact brings the responsibility for this loss more upon the members of this Asso-

ciation than upon any other single body of men in the United States.

Now, when you add to the average loss of one hundred and fifty million dollars (\$150,000,000) the cost of sustaining insurance companies, the excessive cost of water supplies due to the unfit construction and protection of city buildings, and the excessive cost of fire departments due to the same causes, you reach a sum, of the cost of fire to the people of this country annually, of two hundred and fifty to three hundred million dollars, which is equal to ten (10) per cent. to fifteen (15) per cent. of the annual profit or saving of the nation that is possible in any normal year. In other words, if the annual product of this country is two hundred and twenty-five (\$225) worth per head of the population, at which I compute it, reaching the sum of a fraction under nineteen thousand million dollars (\$19,000,000,000), or what is commonly called nineteen billions (19,000,000,000), a larger estimate of the value of our annual product than has ever been put forward by any other economist or statistician, we may set aside, as the profit or increase of capital ten (10) per cent. of this sum, or nineteen hundred million dollars (\$1,900,000,000) a year saved for the addition to or maintenance of the capital of the nation, ninety (90) per cent. being consumed in the process of protection. In that event the ash heap and the other expenses or cost of fires comes to fifteen (15) per cent. of the normal profit of the whole nation, and a very large part of that occurs in risks for which the members of this Association are responsible.

What are you going to do about it? Limit yourselves to charging the managers of the stock fire insurance companies with extortion, when for the past ten (10) years or more there has been no profit in fire insurance. On the contrary, a heavy loss, made up only by the banking department of these companies. All the dividends that they have made and their whole existence have depended on the income from the investment of their capital, their surplus and their annual premiums. In this way they have been enabled to continue to insure your risks and others at a loss.

Again, I ask you, will you limit yourselves to denouncing the managers of insurance companies, without knowledge of the facts, or with only a limited knowledge of a limited part of each of your own occupations; or will you endeavor to reduce the cost on insurance by attending to your own duties to your own property and by removing the outrageous causes of loss which you tolerate because you have been trusting to a policy of insurance for your protection and neglecting in a vast number of cases to protect yourselves?

I know there are conspicuous exceptions even among those who are not yet insured under the mutual principle and subject to the inspections of the mutual underwriters. I know that here and there is a large establishment which is as thoroughly guarded and as well inspected as any Factory Mutual risk; but how many such are there? Do they number one in a hundred in proportion to the risks that are written in the Factory Mutuals? I think not. I should be very glad to have it proved that I am in error.

Establish a System of Inspections.

What, then, will you do about it, if I told you that it is not yet safe for you to attempt to organize a general mutual system for the general protection of your factories and workshops? You can do the one thing that lies at the foundation of the Mutual System: Establish a well-organized and complete system of monthly or quarterly inspections to be made by trained inspectors, reporting to yourselves in order that you may immediately remove the causes of hazard which you now tolerate simply from ignorance; and then supplement that inspection by experts by establishing blanks and putting in force a system of self-inspection of your own premises, as more than one-half the Factory Mutual members now conduct that work, rapidly increasing in number until all will establish that practice. You may do this by agreement of the owners of insured property in a single block of a city, in a single ward, in a whole city, a whole county, or a

whole state; or you may organize a system in your National Association under the supervision of your officers, by which you may slowly but surely establish a quarterly inspection of every establishment belonging to every member in the United States.

I know not how many you number; I suppose there may be five thousand (5,000) separate risks represented by your members. What of that? There are more than three thousand (3,000) separate risks or buildings standing on the premises of the thousand members (a few more or less) whose property is insured in the Senior Mutual Companies, with a considerable number of the Junior risks added—a total valuation to-day of about fourteen hundred million dollars (\$1,400,000,000), and that great line of risks, covering a wide area as far as the Mississippi River and into Alabama, is inspected three times a year on our behalf, with frequent special inspections, on request, by experts under our supervision; and the cost of the service is assessed at one hundred and thirty-three dollars (\$133) per million on the amount of risks outstanding December 31, 1904, making the sum appropriated for the service of the present year \$170,792.95. Out of this sum will be defrayed the salaries of all the men employed in the Bureau of Inspections, in outside and inside service. It will cover the cost of all the plans (the best insurance plans ever made, of which I send you an example), each edition being printed in sufficient number to supply all the insurance companies, the owners and the agents with such copies as they may require; and the sum will cover all the engineering service, civil, hydraulic, electrical and chemical, which we render to our members on request.

Now, if by this system, mainly of inspection and of instruction following inspections, we have been enabled to reduce the losses by fire for ten (10) years to an average of six cents per hundred dollars (\$100) and for the last year to an average of less than two cents per hundred dollars (\$100), what will you do about it? How much will you reduce the waste of fire in your own factories and workshops during the next five years by doing likewise? How much will you save yourselves in the interruption of your business, often the worst loss that ensues after a fire? By the way, we not only give our policies for indemnity against the actual loss by fire, but we also issue policies under the name of "use and occupancy," insuring the fixed charges during the period in which works may be stopped for repairs, and we insure against the leakage of sprinklers; all that is within the six cents and the two cents a year.

Is it worth it? If it is, what will you do about it? And with that pertinent (or impertinent) question I submit the treatise which I have been asked to put before you on "How to Reduce the Cost of Insurance."

THE APPLICATION OF MR. ATKINSON'S PAPER TO OUR INSURANCE DEPARTMENT.

The gist of Mr. Atkinson's paper printed in the foregoing columns is, "Inspect," "Inspect!" "Inspect!!"

We are thoroughly convinced that Mr. Atkinson is sound in his advice and that a systematic and regular inspection by the members and for the members of this Association, must mean a reduced fire waste and therefore reduced fire rates.

Our members are scarcely in a position to organize a corps of Inspectors by and for themselves. What better policy can this Department inaugurate than to take up this work in a systematic and intelligent manner?

It is the intention to make a systematic inspection the leading feature of our work if it is desired by the members; how they use the Department in the lines upon which we are now working, as fully explained in our recently issued pamphlet, must determine our future policy.

E. P. HEATON, Manager.



Canada and the West Indies

Suggestions as to how Commercial Relations could be Strengthened.

By C. H. COLES, M.A., Oxon., Formerly Prin. Church Theological College of Jamaica.



WHILE the representatives of the C. M. A. are "starring" in England, observed and observing, it must not be forgotten that there is another quarter of the Empire that needs the attention of Canadian business men—the British West Indies. Much attention has undoubtedly been given in recent years, and the visit of Canadian delegates to the Islands some three years ago, and the constant effort of a few enterprising agents have been keeping it up. Still there is "more to follow" in the interests both of the big Dominion and of the beautiful little islands. The latter may be the first gainers, but the predominant partner must also gain in the long run; and, beside the material interest of both, there will be the political as well as sentimental advantages of consolidating the great Empire.

Present Conditions.

At present, except Trinidad, the British West Indies seem on the down grade, and without assistance are likely to remain so. The most optimistic newspaper of Jamaica can only look forward to thirty years hence for much prosperity. But it is the firm conviction of the present writer and of a growing number of thoughtful men in the West Indies, and in Canada too, that this return of prosperity could be greatly hastened by closer relations between North and South. We admit frankly that there are many difficulties and obstacles in the way, in the shape of present trade relations between the Islands and the Mother Country, and the United States of America even more, and of the inertness of the former—as much a misfortune as a fault—and of the distance, geographical and otherwise, between the two sections. But the latter is not so great as between Halifax and Vancouver, and need only hinder present political approximation.

Closer Intercourse.

Allowing for, but not now dealing with these difficulties, let us think of the possible lines of a closer intercourse, and then of the means to bring this about.

First: Exchange of produce.

The West Indies could supply the Dominion with all—at present—of its tropical produce, viz.: Cane sugar, coffee, cocoa, bananas, oranges, lime-juice, pine-apples, cocoanuts, pimento or all-spice, the minor products of cinnamon, nutmeg and pepper, and a large variety of other fruits and vegetables, as yet unknown, but, once known, appreciated. To those who have seen the extraordinary fertility, and the exuberance of southern soils, the possibility of output seems almost unlimited. The familiar adage, "Tickle the soil with a hoe, and it laughs with a harvest," seems literally true. Better methods of cultivation and of packing and shipping, would undoubtedly constantly increase the output. Take sugar; one estate in Jamaica, last year taken up by a well-known Scotch firm and liberally endowed with new machinery, turned out more and better sugar than it had done for the last 20 years. Bananas, again—the mainstay of Jamaica for the last 15 years—were once regarded chiefly as food for pigs, and even a few years ago one was solemnly assured that oranges grew better without cultivation. I have omitted rum, tobacco and cigars, from want of personal knowledge, but not because they do not exist in quantity and are not high in quality.

On the other hand, Canada could supply much, if not most, of what is now imported from England or the United States, with a much shorter voyage than from the Old Country, and also than from the Middle and West of the Great Republic. The only exports of any importance now are salt fish, butter, flour and some lumber. The first-named two articles have been coming in large quantities from Halifax for years. Flour from Ogilvie's Mills has been increasing in demand, and now supplies the chief bakeries of Jamaica, and, for all I know to the contrary, in other islands also. There is no reason why boots and shoes and machinery and other manufactured articles should not follow, when there is a surplus of production from the home and British market.

Next: Apart from commerce, there might also be a considerable growth of exchange of visits between North and South, whether for health, pleasure or business. True, already a certain number of Canadians find their way down South in the winter, and a small number of West Indians come North. Of course there is here also an obvious difficulty as to time, for on both sides the summer is usually the most convenient time for vacations, and then there is not so very much to choose, between some days at least, of North and South. Still, except for a few days a month the Canadian hot month would be decidedly cooler, as per contra, the West Indian cool month would be immeasurably warmer. This, however, is a trade article, and the tourist business can only be treated here as business. But it serves the purpose of making individuals more familiar with the people and country of the other end, and also of increasing trade, both directly by the circulation of money by tourists, and indirectly by the trade connections that would naturally follow in many cases.

How to Strengthen the Ties.

The first method obviously will be advertisement or diffusion of information about the respective colonies. It was said in Jamaica that Canada was practically unknown until the Exhibition of 1890, and the reverse is probably near the mark too. Commercial travellers have been doing a good deal in the West Indies, but the latter are very conservative, and, as already hinted, have many ties to England and the United States, and will only give way to persevering canvassing such as is practised by the Americans. The other side is more difficult as the industries are not such as to suggest travellers, and a great curse of West Indian producers is want of co-operation. Some methods of advertising and agency, however, must be feasible and could be found out.

Steamship Service.

An even more important and imperative method is better direct steamship service. Many Canadians probably are ignorant of any service whatever. But it does exist, such as it is, and two boats a month sail from Halifax to Demerara, taking in the eastern group, and one a month to Bermuda and Jamaica. Speaking from knowledge, the latter service is very poor and entirely inadequate, the ship used, though sound, is only 600 tons, not much larger than a Toronto ferry boat. Another line, the Canada-Jamaica, with some connection with the C. P. R., runs two boats a month to Jamaica, but not larger than the first named, and with no passenger accommodation. Merchants and manufacturers should urge on the Canadian Government to promote either or both of the schemes proposed for connection with Canadian ports by the two companies already connecting England and the West Indies. The Elder-Dempster Co. proposes an extension from Cuba to Jamaica of the line suggested to the former island. The Royal Mail Co. proposes a direct line to Bermuda and Trinidad, with connections to Jamaica and all the other islands and the Central and South American ports already served by their steamers. Starting from Montreal in summer, and the Maritime ports in winter, these steamers would soon carry full cargoes and complement of passengers, and repay any initial outlay or subsidy. Space forbids more than the mention of another method which is the employment of Canadian capital and business principles in the development of the West Indies. The success of various Canadian-owned street car companies and of the American United Fruit Co., shows the path to other concerns, that will provide not only money, but men to supervise and guide.

Enough has been said, we trust, to urge the Dominion, nearing its 40th year, to put out its feelers to the south as well as to the north and west and begin at once to make Sir John Macdonald's ideal of such an all-embracing and self-sufficing British North America a happy and useful reality.

LITERATURE FOR BUSY BUSINESS MEN.

(Books for Review should be sent to the Editor, Industrial Canada, Toronto.)

The Foundation of Sociology. Edward Alsworth Ross, Ph.D.
Geo. N. Morang & Co., Toronto. \$1.25 net.

Sociology is not yet an exact science. There is still dispute as to the first principles—the foundation on which its whole structure is to be built. There is still an amazing and apparently quite unnecessary struggle to the uninitiated over a few fundamental and more or less abstract laws.

And so we find the strangest inequalities of interest in this book. Certain chapters like social laws are as dull as any abstract religious treatise of old Puritan days, while others are more fascinating than any novel, more wonderful than any fairy tale.

Theories are discussed at length, but practical questions dealt with are of much greater importance, viz.: the drink question, child labor, the woman question, the negro question. These seem to bear little enough relation to any of the so-called sociological laws.

The finest portions are those on "Recent Tendencies," the "Causes of Race Supremacy" and "The Value Rank of the American People."

In "Causes of Race Supremacy" he finds the Chinese greatest in climatic adaptability—they can live in the tropics or frigid zone. The expansion of the English-speaking races he believes is due largely to their self-reliance, in their ability to stand alone, and in their stability of character. On the other hand the failure of the French in their colonization schemes is due to their entire lack of these essential characteristics.

To martial traits he gives a small place, and says: "I do not believe that the martial traits apart from economic progress are likely in the future to bring success to any race. When men kill one another by aiming of precision, instead of by stabbing and hacking, the knell is sounded for purely warlike races like the Vandals, the Huns and the Turks. Invention has so completely transformed warfare that it has become virtually an extra hazardous branch of engineering."

The only possible danger to the conquering races of the present, viz.: Saxons and Teutons, he sees in race suicide, and he treats of the subject in a few pregnant and caustic pages.

The author Ross has a pretty trick of the pen and is somewhat of a phrasemaker. In speaking of the war of 1864 in the States and its influence on the people, he says: "Indeed it is quite possible that in 1860 before the great killing and the Great Dilution, the human stuff here was some carets finer than it is to-day." As the phrase Great Dilution would imply, he is strongly opposed to the immigration of the Syrians, Armenians, Turks, Bulgarians and the shiftless host of Southern European nations. The whole argument against their introduction is to be formed on the term "Great Dilution."

It is a book well worth a place beside Spencer's "Principles of Sociology," and should add largely to the reputation of the author, who is also responsible for that widely discussed work entitled "Social Control."

The Labor Movement in America, by Richard T. Ely, University of Wisconsin. Geo. N. Morang & Co., Toronto. \$1.25.

There can be found no more striking commentary on the continuity and persistence of the so-called labor movement than the way in which the circulation of this book has lasted from the first day of its publication, in 1886, to the present. The new edition has been revised and brought thoroughly up to date—a large appendix added and other improvements made.

Yet the book is not literature—at least in the restricted sense of the word. It is not epoch making, nor does it treat the subject from a new and original standpoint. Ely is no stylist, his

language is commonplace and smacks too much of newspaperdom and the hurried reporter. What, then, is the reason for its circulation—largely in the increasing attention men of intellect are paying to this most important subject, and also because the book is written, so far as any book can be written, without prejudice.

This last is a quality which cannot be over-emphasized. Ely has tried to give an unbiased account of that struggle of labor against capital. His treatment is historical and he spends much space and time in looking for the beginnings and the reasons for them.

He does not write as an advocate of trades unionism or the purely labor side, nor does he go out of his way to defend the unquestioned abuses of some capitalists of the last century. He has attempted and succeeded largely in giving a careful and unbiased account of the whole history of the labor movement, which is such an important issue in trade and commerce of the world to-day.

No solutions for the troubles are suggested, but a great step in that direction is the publication of this peculiarly sane little volume on the genesis and underlying reasons for the growth of the monster trade union system.

International Civil and Commercial Law, by F. Meili. Geo. N. Morang & Co., Toronto. \$3.00.

Meili is Professor of International Law at Zurich and was a delegate to the Hague International Conference. He is a German and thorough. The two are almost synonymous. He is one of the recognized authorities on the subject of international law.

The work was published first in German and has been carefully translated by Arthur K. Kuhn. It is an exhaustive and technical review of the whole subject, and, besides, there is a careful account of the history of its growth.

In its 500 pages or so of solid matter it treats of History of Development, International Civil Law, Law of Persons, Law of Family, Law of Obligations, Law of Succession, Commercial Law proper, Law of Bills and Notes, and also gives in an appendix the text of the International Treaty at the Hague.

This book is already a recognized authority and is to be recommended not only as a text book but as a book of reference which lawyers and all those likely to find themselves in international commercial difficulties would do well to examine.

A NEW KIND OF STEEL.

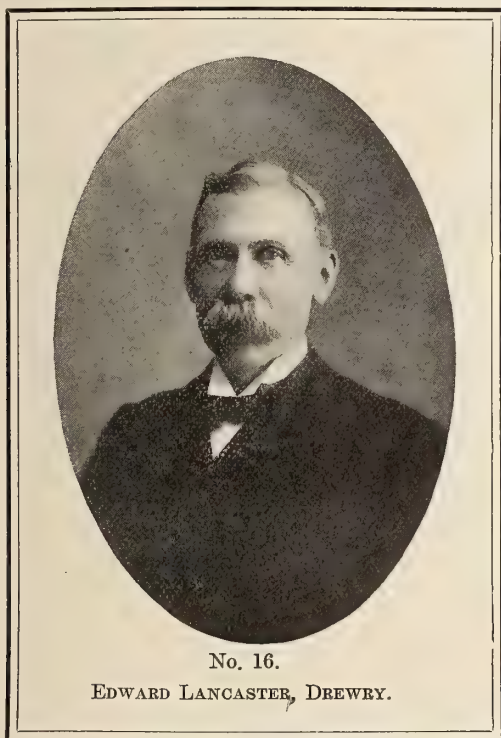
The Sheffield Steel Makers, Ltd., of Sheffield, Eng., have invented and are commencing the manufacture of what they call "Unor" steel—a high-speed tool steel which is air-hardening and will serve equally well for the processes of finishing and roughing. The treatment required to manufacture tools from steel of this description has established, it is claimed, a record for simplicity. All that is necessary to harden it is to heat it to a bright red, and not beyond the "critical point," as is the case with current types of high-speed steel; and to allow it to cool naturally in the air without the use of an air blast. The obviation of the use of an air blast simplifies the process greatly. To anneal "Unor" steel for easy machining all that is required is to heat it to a cherry red, let the heat sink over the fire to a very dark red, and then to plunge it in the water. Experiments have proved that it can be re-hardened or softened any number of times, and that the wearing quality of this new tool material does not deteriorate in any way in the course of these processes.

Among the Industries

THE MANUFACTURERS OF CANADA.

THIRTY years ago, what is now the city of Winnipeg was little more than a straggling settlement, boasting a population of 2,500 souls. Railroads there were none, and the immense areas of tributary territory to the north and west were unpeopled and unknown. Hither came only the trapper or the Indian to barter furs with the Hudson Bay Co., or the hardy settler to purchase the few scanty supplies needed in his humble occupation.

To embark upon a manufacturing enterprise under these conditions called for courage of no mean order, yet such was the situation when one Drewry, a brewer from St. Paul, paddled up the old Red River in a canoe, disembarked at Fort Garry, and camped on the trail running north. That trail is now Main Street, Winnipeg. It is lined with business blocks comparable with the best in Canada. He who can purchase a 25-foot lot on it is accounted wealthy, yet thirty years ago the



subject of this sketch found little difficult in purchasing a farm fronting on the trail for a moderate sum. And here, with two hired men, a horse, and unbounded confidence in the future of the country of his adoption, he laid the foundation for one of Winnipeg's greatest industries.

Edward Lancaster Drewry was born in London, England, Feb. 6th, 1851. Coming to America with his parents at an early age, he was educated in St. Paul where, upon completing his schooling, he learnt the business of the brewer and maltster. In 1874 he married Eliza Starkey, daughter of Captain James Starkey, and three years later he moved to Winnipeg. The now famous Redwood Brewery dates its origin from the same year—1877. From the modest beginning already referred to it has grown into one of the largest and best equipped brewing plants in the Dominion where one hundred and fifty hands are kept busily at work the year round.

Always a public spirited man, Mr. Drewry has been prominently identified with nearly every movement looking to the advancement of municipal or provincial interests. He served as a member of the Winnipeg City Council in 1883 and 1884. From 1886 to 1888 he represented North Winnipeg in the Manitoba Legislature. Since then he has repeatedly been tendered the nomination both for the mayoralty and for the commons, honors which he has been obliged to decline through pressure of business.

In addition to his brewing interests, which of course have first call upon his time, Mr. Drewry has for two years been Vice-President for Manitoba of the Canadian Manufacturers' Association. He is Chairman of the Local Board of the Crown Life Insurance Co., Vice-President of the Havergal College Co., Ltd., Vice-President of the Western Implement Co., Ltd., President of the Auditorium Rink Co., President of the Winnipeg Rifle Range Co., Vice-President of the Drewry & Son Brewing Co., of St. Paul, and a Director of the Union Bank of Canada.

In his own city of Winnipeg, no one is more deservedly popular nor more highly respected. He is an ardent admirer of true sport, and has contributed freely both of his time and of his money to further its cause. In recognition of his services in this connection, he has been elected to honorary positions in nearly every prominent athletic organization in the city, including hockey, lacrosse, football, rowing, curling and shooting clubs. His unselfish devotion to the cause of charity is responsible for his position as Vice-President of the Winnipeg General Hospital. He is also a member of the Advisory Board of the Children's Home, to the support of which he has been a liberal contributor. In the transaction of business, whether public or private, he has always been actuated by principles of the highest integrity, while his keen insight into commercial and industrial questions, combined with good sound business judgment, have gained for him the reputation of being one of Winnipeg's solid men.

The extensive new additions to the Robb Engineering Works of Amherst, N.S., are about completed, and the plant is now one of the finest of its kind in Canada.

Extensive additions are being made to the Pender Nail Works at St. John, N.B., and the output much more than doubled. The additions will include a new wire mill 60 x 100, a machine room 40 x 50, and a cleaning house 46 x 78 in which will be installed an improved five-alley baker.

On July 1st the Mundy Lumber Company opened its new mill at Three Valley Lake, near Revelstoke. The machinery installed is from the Waterous Engine Company and consists of what is known as a double cutting band mill. It is equipped with the latest details of machinery.

The Algoma Steel Company are running along satisfactorily in the production of rails to fill a large order for the Canadian Pacific Railway. Minnesota ores and Pocahontas coke are used. It is estimated that the company's own Helen Mine will ship 240,000 tons of iron ore to Ontario and Ohio ports this year.

The assets of A. J. Stewart, Ltd., manufacturing confectioners, of Toronto, have been purchased by The Stewart Company, who are applying for a new charter under the name of The Stewart Co., Limited, with Mr. L. J. Applegath as president, Mr. A. J. Stewart superintendent, and Mr. W. P. Robinson, manager. The company are now in a better position financially than ever, and are improving the equipment for the manufacture on a larger scale of their well known chocolates.

The La Plata Mines Co., of Nelson B.C. are making extensive improvements to their plant and expect to spend upwards of \$75,000 on new machinery.

The first gasoline traction engine to be manufactured in Canada is now being built by the McLachlan Gasoline Engine Co., Limited, at their new factory in Toronto. It will be on exhibition this summer at the Toronto Fair.

An immense deposit of gypsum located on the Tobique River near Perth, N.B., will shortly be taken hold of by a strong company said to be closely allied to the C. P. R., and on a large scale, plaster paris will be produced for fertilizing, constructing, foundry use, plate glass manufacturers, etc.

The first Portland cement to be made in the Maritime Provinces was turned out on July 10th at Sydney, C.B., when a trial test was made of the plant newly erected by the Sydney Cement Co. The machinery worked excellently in every detail and the product was found to be of an exceptionally good quality.

In Toronto, on the 29th ult., the large five-storey warehouse occupied by The Ames-Holden Co., Limited (selling agents of the Granby Rubber Co.), was destroyed by fire and \$70,000 worth of rubber footwear was lost. In about two weeks from that date the company would have been located in their new buildings on Wellington Street West.

The Union Bag and Paper Co., of New York, having mills in various parts of New England, have purchased the Charlemagne Lumber Co., Quebec. The local management will be unchanged. It is said that from ten to twenty carloads of pulpwood will be shipped daily to the various establishments controlled by the purchasers.

The demand for pulp from the Lake Superior Corporation's pulp mill is very large. If the mill were larger there would still be no difficulty in disposing of the output, and the result is that the company is already considering the extension of the plant. It is stated that the net earnings of the plant have during the last twelve months been between \$100,000 and \$120,000.

An attractive and well illustrated catalogue of 247 pages has just been published by the Canadian-Buffalo Forge Co., of Montreal, and Quebec. Many new and ingenious apparatus for exhausting, heating, ventilating, draft inducing and drying are therein introduced and explained, as also machine tools, etc., of the latest and most improved types. The catalogue is concluded with a series of tables in which are given some most useful calculations relative to heating, ventilating, drying, etc.

Some months ago Mr. Harry J. Crowe, of Halifax, N.S., obtained an option upon three Newfoundland properties, viz., the Newfoundland Pulp and Lumber Co., the Newland Co. and the Lumber Estates Co., embracing an area of 1,600,000 acres. Mr. Crowe went to London and has succeeded in forming a syndicate embracing representative financiers and publishers in London, with Boston and Montreal capitalists, with a capital of \$5,000,000. This syndicate will take over the properties and proceed to develop them. The presidents of the three different companies, one of whom is H. M. Whitney, of Boston, at a meeting held recently ratified the agreement made in London.

The company's steel rail plant is also active. Superintendent D. D. Lewis has applied to the Executive Committee for an appropriation that will enable him to erect a plant for the manufacture of rails of a lighter weight. In his report Mr. Lewis says that there is at present a good market for the output of such a mill, and the demand is bound to grow very fast. Such a plant could, he says, be operated with a very substantial profit, because it could make use of all the old scrap iron about the foundry and the large steel rails that are thrown aside because some flaw is found in them when the tests are made. A member of the Executive is authority for the statement that Mr. Lewis' suggestion will be acted upon as soon as the Executive can see its way clear to act.

The Canada Steel Goods Co., Ltd., of Toronto, is about to erect a new factory in Hamilton, and is advertising for tenders for a cement and frame structure.

Among the concerns particularly interested in the tariff adjustment in respect of cereals is the American Cereal Company, of Peterboro', which corporation quite recently erected a large and up-to-date plant.

In June, 1900, the Murphy Iron Works received an order from the Cambria Steel Co., Johnstown, Pa., for four furnaces; the 34th order was received in June, 1905, for 16 furnaces, making 264 boilers equipped with Murphy Automatic Smokeless Furnaces.

The Colonial Ink Company, who have lately moved from Peterborough to new and more spacious premises in Hamilton, enjoy two distinctions: First, that of being the only ink manufacturers in the Dominion; and, second, that of producing an article as good as that made anywhere in the world.

The Soo Falls Brewing Co. are making extensive alterations and additions to their plant at Sault Ste. Marie, Ont. The present building is being entirely remodelled, after which it will be veneered with brick and a large wing added to the west. When the improvements are completed the capacity of the plant will be practically doubled.

It has been announced that the Plymouth Cordage Co., of Boston, Mass., have decided to establish a branch factory at Welland, Ont. They have secured options on 173 acres of land contiguous to the Canal, will erect plant, buildings, wharf, etc., to cost something in the vicinity of one million dollars, and will employ from 500 to 600 men.

The sheet steel and tin plate imported into the Dominion amounts to \$5,000,000 annually, but Canada is now to supply at least a portion of this requirement herself. A plant is to be established in Morrisburg, Ont. The steel works at Sydney will supply the necessary steel, it is said, which will be worked up into tin plates by the process in common use in Wales and the United States.

To the many excellent architectural supplies manufactured and sold by the Pedlar Metal Roofing Company, of Oshawa, this company has lately added a new material known as Flexible Rubber Ready Roofing. It is claimed for it that it is not only highly proof against water, acid and alkali, but, owing to the absence of either pitch, tar or asphaltum in its construction, it is entirely unsusceptible to climatic changes or extremes. Wool felt is the basis used, the filler being a secret solution of an elastic nature.

The Canadian Locomotive Company has recently delivered several new locomotives—all of the so-called Pacific type—to the I. C. R. The dimensions are: Weight on drivers, 127,000 pounds; weight in working order, 187,000 pounds; weight of tender, 122,300 pounds; total weight of engine and tender, 309,300 pounds; cylinder, 21 x 28 inches; working pressure, 200 pounds; diameter of driving wheels, 72 inches.

In the advance in the duties on white lead, the Carter White Lead Company, of Montreal, is particularly interested. This corporation began the erection of a white lead plant on St. Catherine Street, corner of Delorimier Avenue, some six months ago, and are now about ready to place their product on the market. The plant, which is virtually a branch of a large corporation in the United States, is the first of its kind in Canada; in fact, is the forerunner of what may prove to be a very large industry. For the raw material they depend on the British Columbia output, which up to the present was sold in the United States, to be ground and returned to the Dominion as the finished articles. The smelter at Trail, B.C., furnishes them with the necessary materials. The process of grinding the lead is more different from the old methods in vogue, which is known as the Dutch process and which has been in use for centuries back.

TRADE ENQUIRIES

NOTE.—For further information regarding any enquiry mentioned under this heading or the names of enquirers, apply by number to the Secretary, at Toronto.

- 1 **Agencies—Birmingham**—A correspondent in Birmingham, who has for the last ten years been manager of one of the largest English exporting firms is about to open an agency business in London, and is desirous of handling Canadian goods.
- 2 **Capetown**—A correspondent from Capetown, South Africa, who is at present in London, England, has asked to have his name put before Canadian manufacturers or shippers who wish to develop trade in South Africa. The correspondent is an agent, not a merchant, but can finance shipments if necessary. He will not consider anything but sole agencies. He already represents some Canadian houses and forwards several references.
- 3 **Liverpool**—A firm of general merchants in Liverpool, England, making a special feature of mill products, including cattle food, also canned goods and glucose, etc., are desirous of opening up correspondence with Canadian shippers.
- 4 **London (a)**—A firm in London, England, established for the last thirteen years doing business in all kinds of Eastern and Colonial produce, desire to receive appointments as representatives of shippers of Canadian produce and manufactured goods.
- 5 **(b)**—A correspondent in London, England, having connection with firms distributing to the baking and grocery trade, is in a position to represent manufacturers doing business with such merchants.
- 6 **(c)**—A London, England, firm already holding the agency for a Canadian house, is seeking additional agencies.
- 7 **New Zealand**—A New Zealand business man now in England is seeking the representation of Canadian houses desiring to appoint an agent in his colony.
- 8 **United Kingdom**—An agent with a connection throughout the United Kingdom in the grocery trade is desirous of representing a Canadian firm exporting proprietary articles. He is willing, if good business offers, to pay his expenses from England for the purpose of investigating any likely propositions that are offered. He has had eight years' experience through England, Ireland and Scotland, both in selling and advertising, and is representing some important firms.
- 9 **Wellington**—A firm of commission merchants and manufacturers' representatives in Wellington, New Zealand, have written fully regarding the agency business conducted by them and have sent a draft form of an agreement which they are willing to carry out with any manufacturers who will consider appointing them as their agents for New Zealand.
- 10 **Apples (Evaporated)**—A correspondent in Hamburg, Germany, already representing some Canadian houses, desires to get in touch with exporters of evaporated apples.
- 11 **Board (Leather)**—Inquiry is made from London, England, for the names of Canadian manufacturers of leather board.
- 12 **Bristles, Brush-Making Machinery, Wooden Broom Heads**—A Liverpool, England, firm of bristle merchants and brush manufacturers, carrying on a wholesale business, wishes to purchase, or is willing to sell on commission, the above articles. They ask for quotations f. o. b. Liverpool. References will be provided if business results.
- 13 **Buckets (Galvanized)**—An enquiry is to hand from St. John's, Newfoundland, for galvanized buckets for ordinary household and ship work.
- 14 **Castings, Forgings, Rails, Billets, Blooms, Ingots, Etc.**—A company in London, England, carrying on a wholesale business since 1898 and dealing in iron, steel, ores, timber, etc., desire to act as agents for Great Britain and Europe generally for the above articles. They ask for quotations f. o. b. port of shipment. They are willing to arrange payments on basis of cash against documents. They will buy all goods direct and will also provide references to parties taking this matter up.
- 15 **Cheese, Canned Goods, Flour, Cereals, Biscuits, Canned Salmon, Condensed Milk, Canned Fruits, Meats, Etc.**—A correspondent in Ghent, Belgium, who has two large retail stores and also carries on a wholesale business, solicits correspondence from Canadian manufacturers in the above lines. He has recently investigated the Canadian Exhibition at Liege and believes considerable business may be done. He has been established since 1887. He asks for quotations c. i. f. Ghent, and wishes to arrange for a general agency for Belgium. Three different banks are given as reference.
- 16 **Doors, Hardwood**—A New York export commission house already doing a large business with Canadian firms, desires to secure catalogues and prices of hardwood doors for the South African market.
- 17 **Dowels, Perambulator Gears, Handles**—A firm of mining agents, general merchants, ship owners, etc., in Sydney and Newcastle, Australia, are desirous of extending their connections with Canadian manufacturers. They wish to be appointed agents in Australia and request correspondence from shippers together with terms of any proposition arranged. The firm is in close touch with the leading wholesale importing and retail trade, and have a large staff to handle their goods. Particular attention is paid to their foreign agency business. They are in a position to do business on basis of commission on all sales made. In the same mail they send full specifications for perambulator gears, including under gears, hubs, handles and wheels. They have also given full information regarding dowels and handles, which they are open to handle immediately. A number of well-known references are forwarded.
- 18 **Excelsior**—A firm of agricultural produce merchants in Carlisle, Scotland, have asked to be placed in communication with Canadian shippers of excelsior.
- 19 **Fish**—A correspondent in Montego Bay, Jamaica, invites fish merchants in Nova Scotia or Newfoundland to correspond with him. He is in a position to handle 100 barrels of her-ring a month.
- 20 **Fruit and Vegetables (Canned)**—A firm in the wholesale grocery trade interested in placing on the English market all kinds of food stuff, especially fruit and vegetables in tins and glass bottles, is looking out for the agencies of Canadian shippers.
- 21 **Furnishings (Office)**—A New York export commission house asks for the addresses of Canadian manufacturers of metal office furnishings who are in a position to supply goods for the South African market.
- 22 **Gears (Perambulator)**—A mercantile broker and commission merchant in Sydney, Australia, has sent specifications for perambulator gears. He asks for quotations f. o. b. New York on 1,000 sets, 750 for Melbourne and 250 for Sydney.
- 23 **General Merchandise (a)**—A recent visitor of the Association who is the managing director of an important firm in Wellington, New Zealand, is prepared to make purchases for cash of such Canadian goods as are suitable for the New Zealand market, and any communications with price lists that are addressed to the firm will be carefully considered.
- 24 **(b)** The Association has recently been favored with a call from the managing director of one of the largest firms of merchants in Sydney, Australia. This firm is open to buy for cash any Canadian goods that are suitable for the Australian trade. Correspondence is solicited.
- 25 **Handles (Shovel, Broom, Hoe, Pick, Sledge and Slasher)**—A company in Glasgow, Scotland, have sent specifications for

different sizes of handles as named above. Quotations are asked c. i. f. Liverpool. They give their bankers as reference. They are willing to do business on basis of cash against documents.

- 26 **Implements (Farm)**—A company of furnishing and general ironmongers, Palmerston North, Australia, who have been selling agricultural implements for some time, desire to make a change in their agencies, and are open to communicate with Canadian manufacturers. The firm already hold the agencies for a number of important foreign houses in other lines.
- 27 **Minerals, Metals, Ores and Timber**—The names of Canadian exporters of the above have been asked for by a London, England, firm.
- 28 **Oatmeal**—A Copenhagen, Denmark, house is seeking the representation in Denmark of a good Canadian oatmeal mill.
- 29 **Paper (a)**—Inquiry is made from England for the names of Canadian paper mills making "long elephant," 22 in. wide, 10 oz. and 12 oz., of 12 yard lengths.
- 30 (b) An indent agent and manufacturers' representative in Wellington, New Zealand, who is at present in England, desires to get in touch with manufacturers of printing paper and newspaper in reels. He calls attention to the fact that Canadian paper now receives preferential tariff treatment in New Zealand.
- 31 **Paper (Wall)**—A wholesale merchant established since 1879 in San Salvador, desires to purchase wall paper; shipments to be made via New York and Panama; business to be done on a cash basis; references are forwarded.
- 32 **Paper (Wax)**—The names of manufacturers of parafine wax paper are asked for by plantation owners in Newcastle, Jamaica.
- 33 **Paper, Office Furniture, Letter Files, Etc.**—A New Zealand agent and manufacturers' representative at present in England has asked to be placed in communication with the best Canadian firms manufacturing white printing paper and white paper in reels for printing newspapers; roll top desks, letter-filing appliances, and similar lines.
- 34 **Petrol**—Two London, England, firms have been making enquiries regarding the possibility of procuring petroleum spirit or gasoline from Canadian firms. One merchant is in a position to handle 2,000 gallons a week. Quotations are asked for delivered London, including free casks.
- 35 **Produce**—A produce firm in London, England, is seeking the representation of Canadian exporters.
- 36 **Rollers (Blind)**—A manufacturer of paper blinds and fittings in Birmingham, England, desires to procure blind rollers in Canada. He wishes to secure the same for his own factory and also to represent a manufacturer throughout Great Britain.
- 37 **Rules or Rulers (Wood)**—A member of the Association wishes to get in touch with some firm in a position to make school rulers.
- 38 **Sodalite**—The addresses of companies working sodalite deposits in Canada have been asked for by a London, England, firm.
- 39 **Sprayers (Air)**—A correspondent in Sydney, Australia, asks for the names of manufacturers of compressed air sprayers which are used for cleaning and drying the head and hair after shampooing.
- 40 **Tallow, Oilseeds, Canned Fruits, Fruit Pulp and Provisions**—An English firm offering good references is desirous of obtaining the representation of Canadian shippers of the above.
- 41 **Underwear (Fleeced)**—A London, England, company who have been handling in a small way Canadian fleeced underwear desires to extend its business along these lines. During the winter of 1904-05 their sales in this article alone exceeded £30,000.
- 42 **Veneer (Ash)**—A Liverpool, England, firm is seeking correspondence with Canadian shippers of the above.
- 43 **Mexico**—A Canadian who has resided and conducted business for 13 years in Spanish America and who will open in Mexico City an agency to be dedicated exclusively to the repre-

sentation of a limited number of Canadian manufacturers, would like to communicate with those interested in the Mexican field. Through competent Spanish-speaking travelling salesmen, all important towns and cities will be regularly visited and the sale of the goods of all clients will be strongly and unpartially prosecuted.

FEED WATER, HEATERS AND PUMPS.

The request, "Please give a formula for boiler compound for water in which there is a heavy lime deposit," in the "Question Box" of the N. E. L. A., received three responses. Two of these advocate the use of washing soda in conjunction with kerosene oil, the proportion being a bucketful of soda to two gallons of oil, for a 100-hp boiler. The third suggests 40 pounds caustic soda, 40 pounds soda ash, 35 pounds liquid hemlock, 15 pounds gambier dissolved in hot water to make one barrel of dissolvent. Of the thirteen replies received to the query, "Which is preferable—to treat the water before it enters the boilers, or to use a high-fire kerosene and mechanical cleaner?" twelve indicate that the former method is preferable, while one recommends that, if the plant is large enough to warrant the expense of a chemical purifier, one should be installed. The replies to the question, "Does not kerosene oil, being itself a condensation from a still, vaporize before any benefit is derived when fed into working boilers to prevent scale?" are seemingly contradictory. The consensus of opinion, however, is that while the use of oil is attended with fair success other and better methods can be found. Ten replies to a question concerning the location of the heaviest deposits of magnesia within a boiler, are common in that all agree that the greatest precipitation is produced at the point of highest temperature. Of the three remedies proposed for keeping feed water pipes clear of scale where the water is exceptionally full of magnesia carbonate, two involve the treatment of the feed water, while the third would allow the scale to form and remove it from time to time.

The answers to a question concerning the advisability of using a heater between the engine and the condenser would leave one in great doubt as to the proper plan to adopt, there being nine positive, five negative and four neutral replies. To the query, "Is it good practice to turn exhaust from station auxiliaries into an open-type, feed-water heater?" the 12 replies would indicate that an open-type heater accumulates the oil, thus making poor water to feed to the boilers and, therefore, if the practice is followed, an oil separator should be used. The advantages of the open-type of heater for large plates are stated to be that it returns the condensation to the boiler, thus saving water and lessening the deposit of scale, and it is easy to keep clean, thus insuring good efficiency, while the advantage of the closed-type of heater is that it avoids the possibility of oil being carried into the boilers. Two replies to the query, "What is the life of a hot water meter when run continuously in full capacity?" indicate that the meter develops an error of five per cent. within ten days, and that the life is about eight months. Although two of the replies to a question concerning the benefit of an air chamber on a boiler feed pump express doubt as to any benefit, the others agree that the air acts as a cushion for the surging water due to the action of the pump, and prevents a water hammer in the feed pipes. In regard to the method of driving auxiliaries a correspondent states that "in a non-condensing plant the motor-driven boiler feed pump is doubtless the most economical form that can be employed. Centrifugal feed pumps have hardly had sufficient use to demonstrate their reliability. If motor-driven pumps are used one steam-driven pump or injector should be installed for use when the generators are all shut down. In turbine plants steam-driven auxiliaries will be the more economical up to the point where all the exhaust steam can be condensed in heating the feed water. Beyond that point motor-driven auxiliaries should be used." The eleven replies to the query "We have a heater, purifier and feed pump which delivers the water to the boilers at 206° F. Is this fairly economical?" agree that the performance is very good.—*Electrical World and Engineer.*

THE METRIC SYSTEM AND ITS CLAIMS.

(Continued from page 20.)

another. And certainly if there be a loss of time to the child in learning the English system there is a greater loss to the adult in writing and printing and speaking the longer and more ponderous names of the metric system.

Where pure computation is necessary, and in this case only, the metric system, on account of its decimal construction, has an advantage over the English system. But, as has been already shown, there are many important cases of measurement where the decimal system of division is inconvenient or even inefficient, and in these cases the metric system fails, while the English system, on account of its elasticity and its duodecimal system of division, where required, enjoys a marked advantage.

With all these imperfections in the metric system it is strange that scientific men, and especially English-speaking ones, should have allowed themselves to be caught so readily by the pretentious bait. For if they had set to work in the proper spirit to devise a system, decimal in character, and adapted to the needs of the great mass of people ruled over by the English-speaking nations, they would undoubtedly have given us something far superior to the present metric system, and instead of resorting to a foreign, imperfect and objectionable system they might now have been employing one as near to perfection as it is possible for a decimal system of measures to be. But if the scientists have been mistaken in their choice that is no reason why the non-scientific and general public should be.

A Duodecimal System Superior to Any.

And finally if we could have a duodecimal notation and a duodecimal system of measures with the inch or the foot as unit, we would have something as nearly perfect as could be desired.

But someone will say that it is impossible to change our system of notation. No, it may be difficult but it is not impossible; and if men had been given six digits instead of five on each hand a duodecimal system would to-day be not only a possibility but an actuality.

The plastic mind of the child could learn one system just as easily as another. All that are needed are proper addition and multiplication tables, and a proper teacher. The change would undoubtedly be more complex than that to the metric system merely, just as the results of the change would be so much higher and the outlook so much broader. But the change if once made would be worthy of the progress of the 20th century and worthy of being handed down to posterity for all time to come.

MANUFACTURERS AT TORONTO FAIR.

The special building provided by the Canadian National Exhibition for a display of processes of manufacture will be fitted up this year for the accommodation of binder twine making, the manufacture of many different specimens of pure food, the weaving of carpets, and other forms of textile manufacture, such as cotton and cheese cloth, boot and shoe making, from the raw material to the finished article, Canadian tweeds and other cloths, and a number of other articles, making in all one of the most interesting features of the great exhibition.

The Model Silk Co. has erected a factory at Bridgeburg. They commence operations with a staff of thirty girls.

Through an expenditure of upwards of \$100,000 in additional buildings and plant improvements, the Redwood Brewery, of Winnipeg, has been converted into one of the most modern and best equipped plants of its kind in the Dominion.

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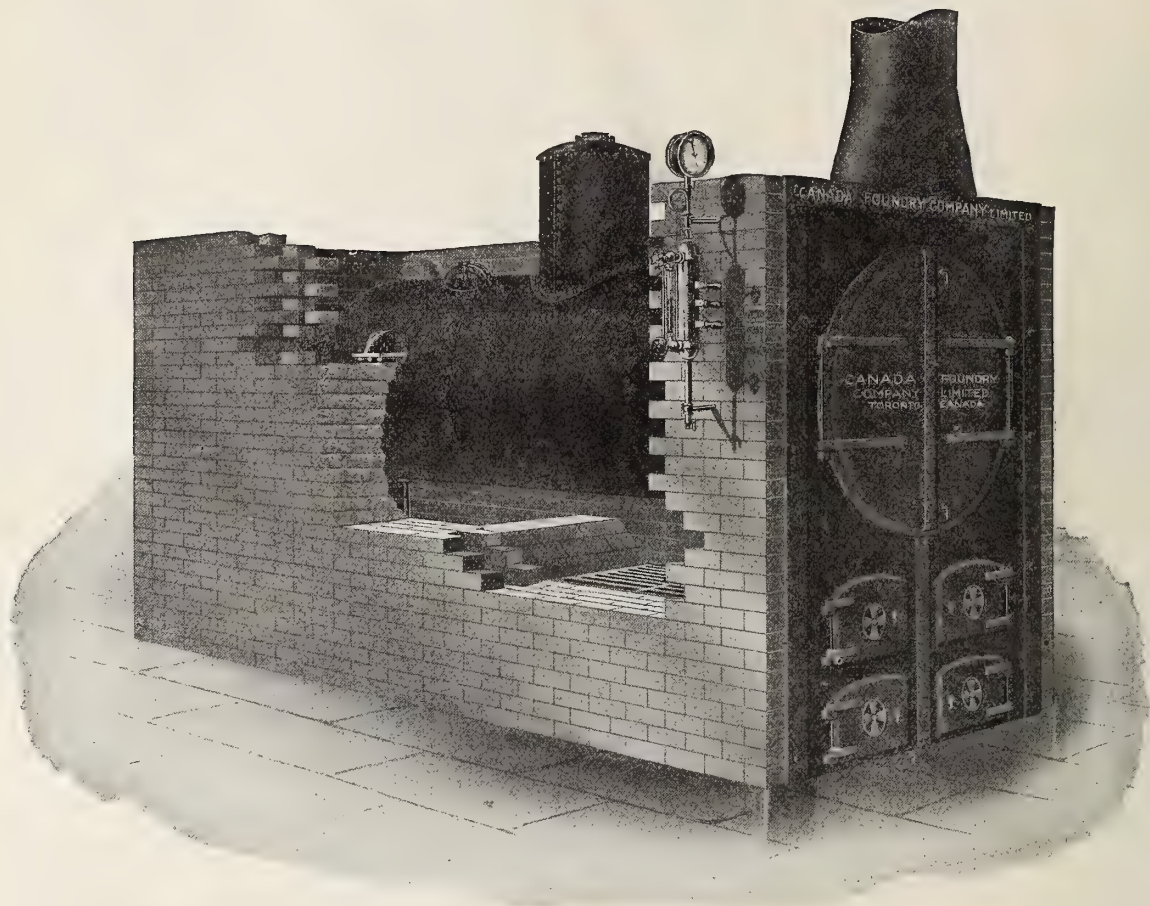
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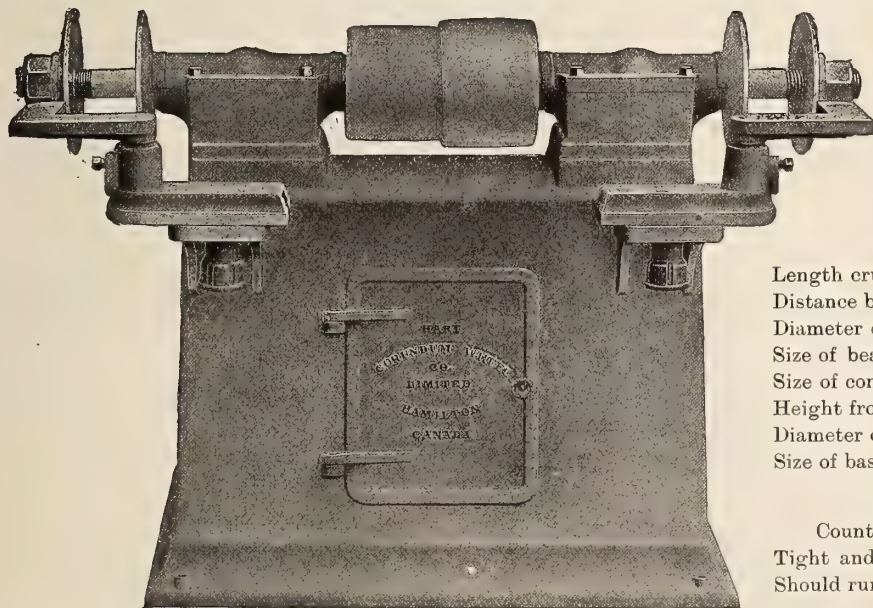
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Every Hart wheel has, imbedded in its centre, a layer of Brass Wire Netting. Experiments conducted at the Case School of Applied Science, Cleveland, show that wheels so provided are about one-third stronger than ordinary wheels. Ask for the Hart, and you will get the best.

CYCLONE GRINDER No. 19



BUILT ON SCIENTIFIC PRINCIPLES

Bearings absolutely DUST PROOF.
Automatic Oilers.

To carry 2 wheels 20 to 30 in. dia.,
4 in. thick.

Length crucible steel arbor.....	57 inches
Distance between wheels.....	45 "
Diameter of arbor between collars.....	2 "
Size of bearings.....	12 x 2 1/16 "
Size of cone pulley on arbor.....	8 and 9 x 6 1/2 "
Height from floor to centre of arbor.....	34 "
Diameter of collar.....	10 "
Size of base.....	31 x 41 "

Countershaft has cone pulleys 17 and 18 x 6 1/2.
Tight and loose pulleys 8 in. diameter, 7 in. face.
Should run 450 revolutions per minute.

Prices on application. Catalogue free for the asking.

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were used in constructing the magnificent Montreal Court House, cut of which appears below.



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"Metallic" Shingles
 "Metallic" Tiles
 "Metallic" Siding
 "Metallic" Clapboards
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 "Metallic" Interiors
 (Art Finish)
 "Metallic" Ceilings
 "Metallic" Ventilating
 Ceiling Centres
 "Metallic" Cornices
 "Metallic" Wall Designs
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 and Buildings, old or new
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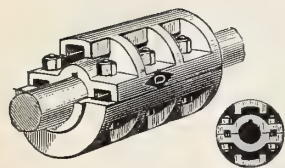
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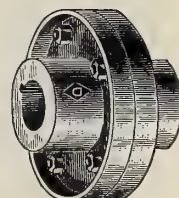
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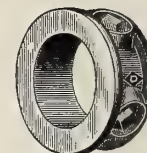
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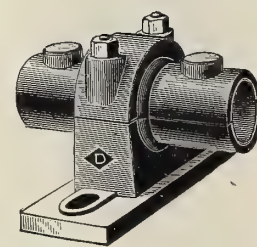
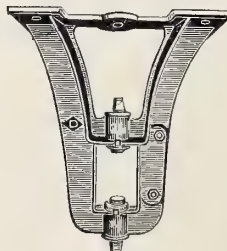
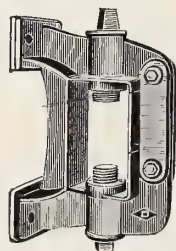
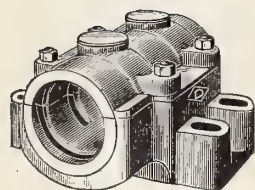


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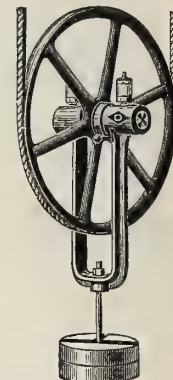
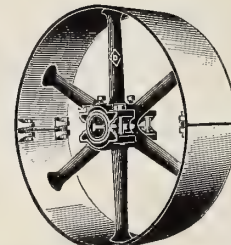
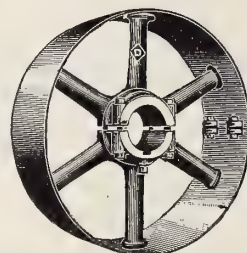
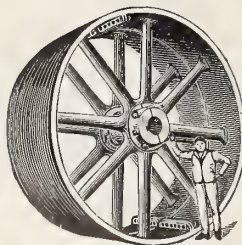
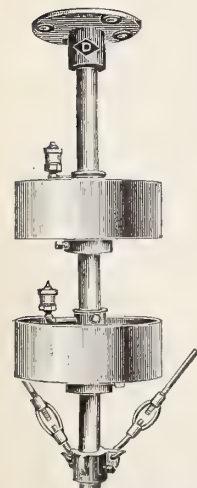


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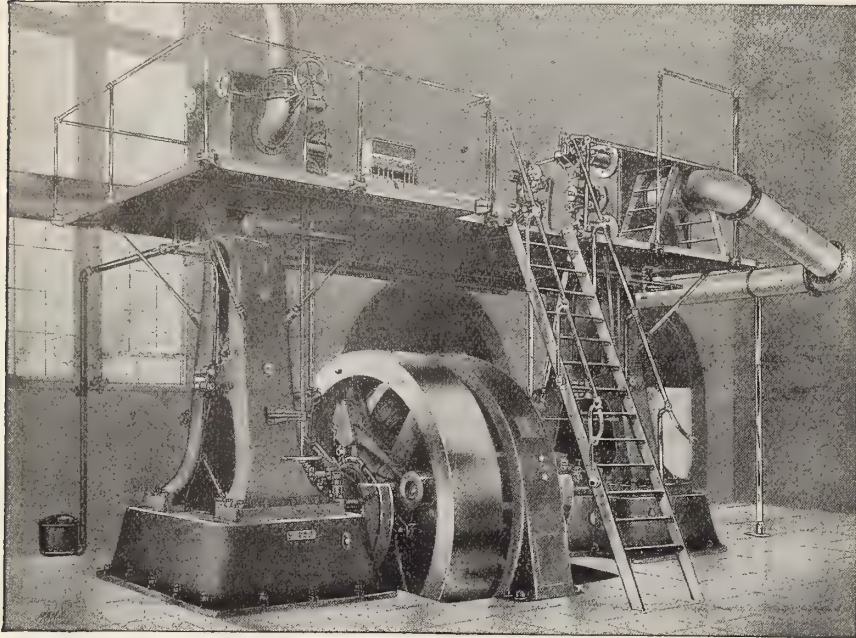
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Alaska Feather and Down Co.	Londonderry Iron & Mining Co.
Armstrong, J. B., Carriage Co.	Lang Mfg. Co.
Amyot & Gauvin.	Laing Packing & Provision Co.
Bell, J. T. & Co.	Lincoln Paper Mills Co.
Boswell & Bro.	London Bolt & Hinge Works.
Berlin Furniture Co.	Letson & Burpee.
Brantford Carriage Co.	Merchants' Cotton Co.
Belding, Paul & Co.	Montreal Pipe Foundry Co.
Caledonia Springs Co.	Matthews, Geo., Co.
Corticelli Silk Co.	Mitchell, Robert, Co.
Christie Bros. & Co.	Montreal Carriage Leather Co.
Canadian Iron & Foundry Co.	McAlpin Consumers' Tobacco Co.
Christie, Brown & Co.	Marsh, Wm., & Co.
Clarke, A. R. & Co.	McPherson Shoe Co.
Clark, Wm.	Morrow, John, Mach. Screw Co.
Clayton & Sons.	Manson-Campbell Co.
Canada Horse Nail Co.	Maple Leaf Rubber Co.
Canadian Packing Co.	Ogilvie Milling Co.
Consolidated Lake Superior Co.	Office Specialty Co.
Chatham Wagon Co.	Ontario Wind Engine & Pump Co.
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Cornwall & York Cotton Mills Co.	Page-Hersey Iron & Tube Co.
Davidson Mfg. Co.	Peters, Simon (Estate of).
Dominion Wire Mfg. Co.	Peck, J. W. & Co.
Dodge Mfg. Co.	Ross & Howard.
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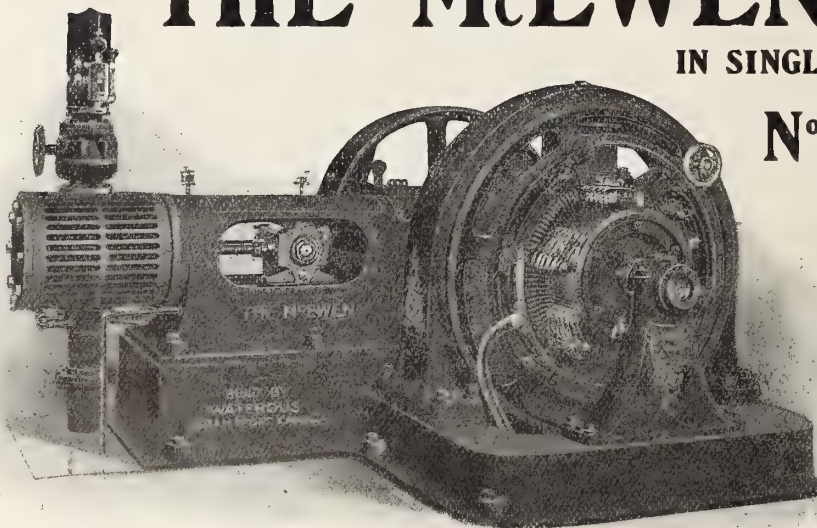


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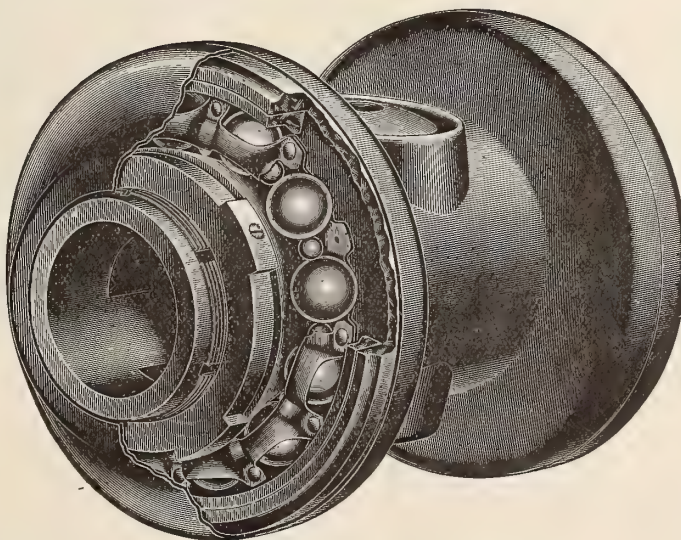
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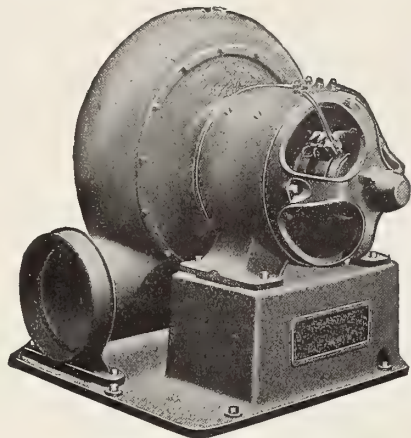
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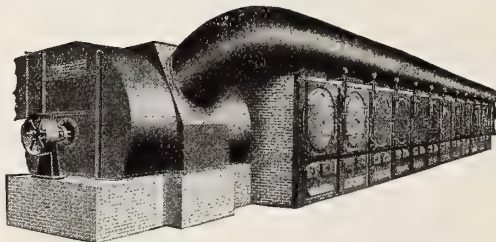
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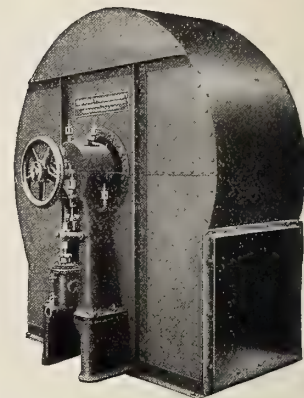


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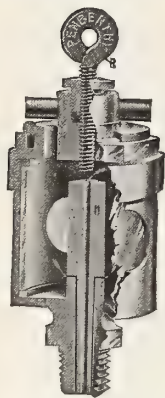


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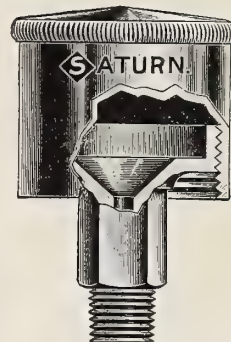
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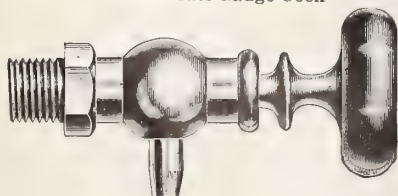
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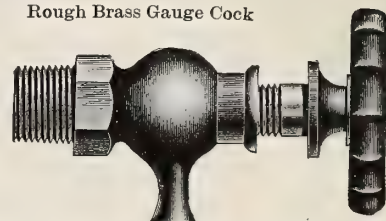
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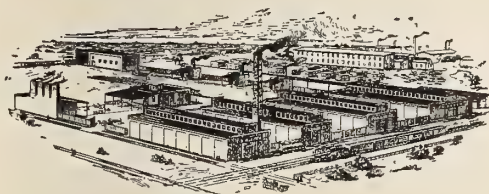
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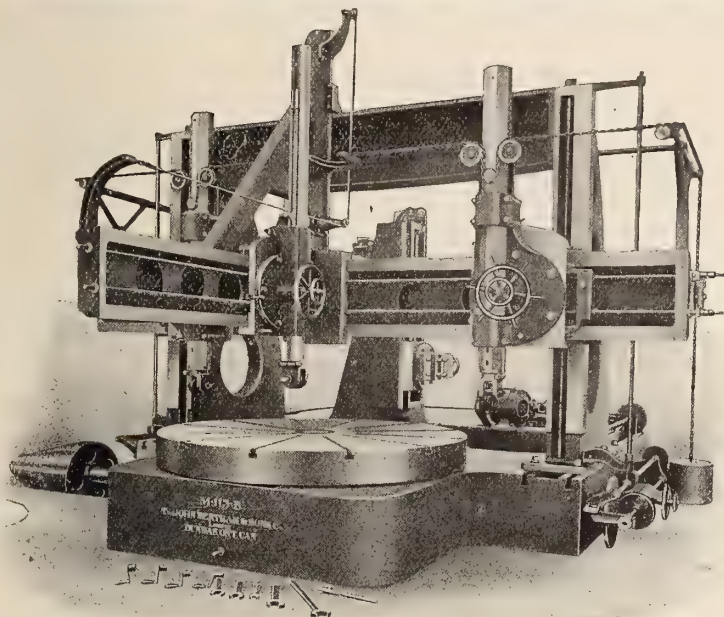
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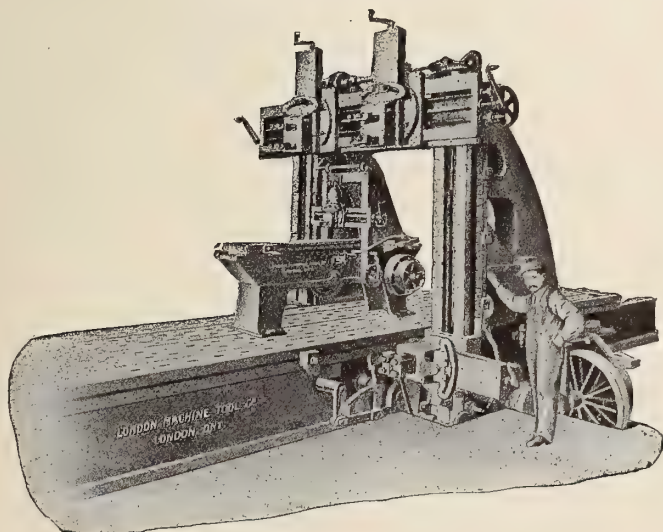
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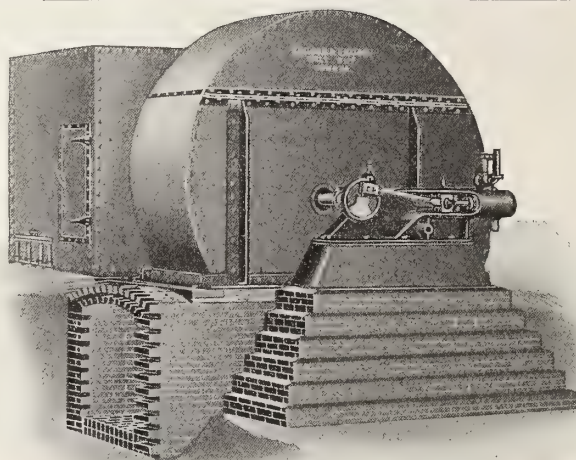
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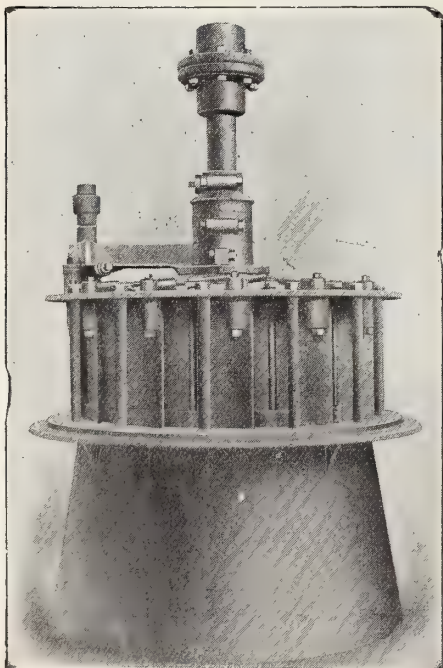
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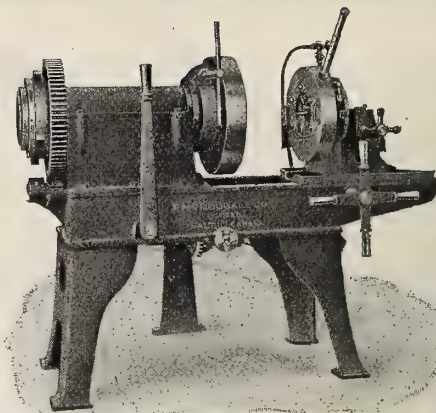
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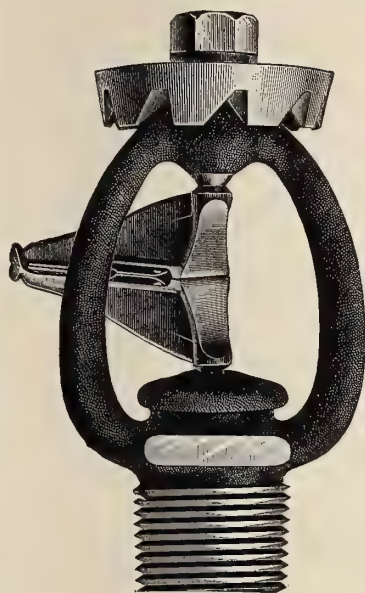
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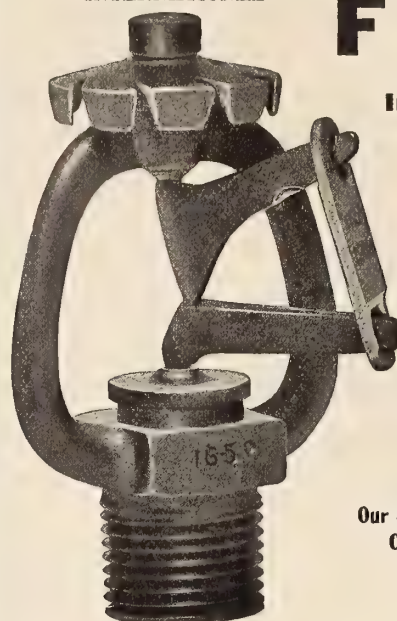
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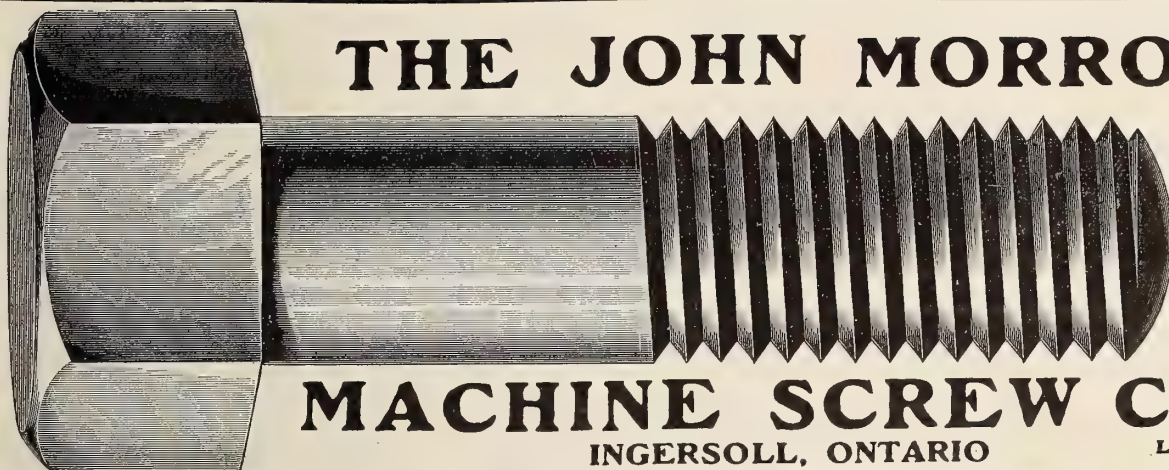
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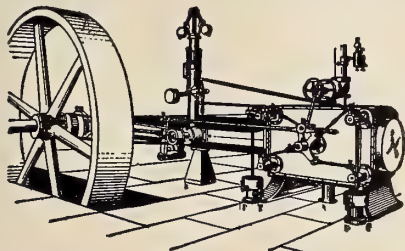
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Vol. VI.

TORONTO, SEPTEMBER, 1905.

No. 2

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A LIBERAL NEWSPAPER'S DEMAND FOR HIGHER PROTECTION.

THE *Ottawa Free Press*, a Liberal newspaper, thinks that the Government should put such a high tariff on locomotives as to force United States locomotive builders to establish branches in Canada. The *Free Press* says:—

"While the Government of Canada is opening the West to agriculture it should put forth efforts to open factories in the East to skilled labor. Our High Commissioner and our commercial agents could, if the Government were to hold up their hands, do as much for the country by attracting capital here as by furthering immigration. If English locomotive makers knew that works in Canada would have a practical monopoly of the trade for the Dominion they would not be long in setting up branches in the Dominion. If they did not, the Baldwins would do what the Deerings and others have done, establish a plant here."

The same reasoning that applies to locomotives is equally cogent as regards many other lines of industry. Make the tariff high enough and the manufacturers of both the United States and Britain will establish branch factories in Canada giving employment to Canadian workmen and thus greatly increasing the consuming population in our cities, towns and villages and creating a profitable market for Canadian farm products.

A QUEER AUSTRALIAN TARIFF REGULATION.

ACCORDING to the statement of Mr. Ross, Canadian Commercial agent at Melbourne, Australia, the new Australian tariff provides that the cost of conveying goods to the Canadian border is added to the value of goods for duty purposes. That is if a carload of goods were shipped over the Canadian Pacific railway to Vancouver and there transferred to ships bound for Australia, the freight charges would be added to the valuation for duty, but if the goods were sent across the border at Emerson, transported over the Northern Pacific to Seattle and there shipped to Australia only the freight charge for the short haul to the border would be considered in making valuation. In the same way if goods are shipped from points in Ontario by way of Montreal, St. John or Halifax, duty will be charged on the cost of transportation to those ports, but if they are shipped by way of New York or Boston, only the cost of transportation to the Canadian border will be included. This is a most extraordinary discrimination against home ports of shipment, and the Canadian Government should lose no time in making a protest. It is true that the same rule applies to the United States goods. For instance, goods manufactured in Minneapolis for the Australian market would escape taxation on the transportation charges to the Pacific coast by shipping them to the nearest point on the Canadian border and then via the C. P. R. and Vancouver. In the same way the manufacturers of Buffalo, Chicago and other lake ports of the United States would find it to their advantage to ship by way of Montreal in preference to New York. Manifestly if such arrangement should be persisted in it will be to the interest of Canadian railways to encourage the use in Australia of United States manufacturers and United States food products in preference to Canadian products.

No doubt this tariff regulation is due to ignorance of Canadian geographical conditions and our Government should have no difficulty in inducing the Australian Government to alter it.

Mr. J. L. Larke, the Dominion Commissioner for Australia, has explained in an interview with the *Toronto News* that when no duty was collected on inland freight, casing or packing Australian officials complained that the Commonwealth was sometimes defrauded by exporters by unduly increasing the charge for packing, casing and internal carriage to the seaboard, the manufacturer making up for the low price of his goods by false charges for packing and transportation. Mr. Larke does not believe that any Canadian firm has done this, but says it was notorious that it was frequently done by manufacturers of other countries. However, he says:—"The Canadian charges for packing, even where the duties were not effected thereby, have been high as compared with the charges by manufacturers of other countries, owing to the fact that Canadian exporters had not

made a study of economical packing, as those of other countries, who have had a larger experience in the export trade, had done. This being continued under the new state of things, it had every appearance of an intentional attempt to defraud the customs, particularly if the Canadian invoice showed, as it sometimes did, that the charge for packing was two or three times that charged by some exporters of other countries on the same class of goods. The same thing would apply in some degree to the charges for inland freight. These invoices naturally fell under suspicion. In many cases, too, Canadian manufacturers were very careless in making their invoices, not understanding perfectly the consequence of the carelessness inflicted upon the consignee."

The best remedy for the Australian difficulty would be the adoption of specific duties in place of ad valorem duties. This would prevent all possibility of fraud.

THE CANADIAN NATIONAL EXHIBITION.

THE Canadian National Exhibition sustained this year its record of annual growth. It was bigger, better and more successful in drawing crowds than ever before. There is no better index of Canada's continual expansion than this great industrial exhibition of which all Canadians have reason to be proud. The influence it exerts in educating the Canadian people to a knowledge of the resources of their country and pride in its industries is incalculable. Probably no other agency has done so much to remove the prejudice of farmers against manufacturers and inculcate the idea that the farm and the factory are mutually dependent on each other. If every newspaper man in Canada and all our politicians could annually visit this great fair and see how harmoniously farmers and manufacturers co-operate to make the exhibition a success there would be fewer attempts to rouse the prejudices of class against class. The commission appointed by the Government to investigate tariff conditions might have learned much by a visit to the Exhibition.

Notwithstanding the fact that several buildings have recently been added the accommodation for manufacturers is altogether inadequate. A new machinery building is most urgently required and the city of Toronto, which derives such great benefit from the Exhibition, should provide money to build one during the coming year.

The most important improvement this year was the new art gallery, and it is interesting to note that a number of the great pictures shown were secured in London and Paris by Mr. W. K. McNaught, the President of the Canadian National Exhibition, while accompanying the excursion party of the Canadian Manufacturers' Association, of which he is one of the most influential members.

BRITISH COAL FOR CANADA.

SOME time ago the Canadian Manufacturers' Association sent a number of samples of the coals commonly used in Ontario to colliery owners of Wales. These samples were examined and an analysis published in last month's INDUSTRIAL CANADA. An editorial that appeared in the Cardiff Journal of Commerce, August 16th, 1905, headed "Cardiff and Canada," is of considerable interest, as it points out a possible field for increasing trade with the Mother Country:—

"Our readers will doubtless have noted with interest the clearance of a couple of cargoes for Quebec during the last four weeks, and the question suggests itself whether it may not be possible to increase the volume of our coal exports to the Dominion of Canada. If a considerable demand for Welsh coal exists at San Francisco and right down the Pacific coast of America to Valparaiso, it is hard to believe that more cannot be done on the Atlantic side of our great and growing colony. In one of

the side rooms of the Cardiff Exchange is a case containing samples of coal with analysis, sent over by the Canadians, and it seems, therefore, that the possibility, if not the probability, of business has suggested itself on the other side. It cannot well be a mistake if some of our larger colliery companies, such as produce more than one quality and description of coal, would reciprocate by sending over a similar box with samples of nuts and peas, besides a large lump or two as specimens of their own coal, to the Chamber of Commerce at Montreal or the Canadian Manufacturers' Association. Cardiff may be in a position shortly to welcome the Canadian delegates who have now been visiting various industrial and manufacturing centres in this country during the last few weeks, and it would be something if the ground were prepared to the extent indicated. It is perfectly true that Canada has her own sources of coal supply, east and west, but for all that American coal, from the Pennsylvania district more especially, finds a large and ever increasing sale in the country. One thing is positively certain, namely, that Canada does not possess any quality, or, indeed, qualities similar to those obtainable from South Wales. Monmouthshire coals especially should have every opportunity. As to dry coals—except for special purposes—we have some doubt. Such coals might indeed find favor in the cities as they do throughout Scandinavia and Denmark. During the American strike four years ago, unfortunately we rather spoil our chances in the United States, and also prejudiced our prospects in Canada by sending over just whatever coal was available, with the result that the great bulk of the orders afterwards went to the Tyne and other northern coal ports. With the great amount of timber and the vast amount of grain grown, outward rates should be reasonable enough to admit of c. i. f. quotations going through. We certainly require fresh markets for our output, and it would be desirable that no further time should be lost in going into the possibilities of business by following the course indicated or adopting some other equivalent thereto."

RESULTS OF CANADIAN PROTECTION.

THE effect of the protection policy of Canada as seen through United States eyes is shown in the following clipping from the *Buffalo Manufacturer*. It shows—as it was intended to—that our protective tariff is beginning to cause an appreciable shrinking in the splendid benefits which have hitherto been enjoyed by the United States in the way of commercial revenues from Canada. But it also emphasizes the soundness of the policy from the Canadian standpoint. All Canadians including her manufacturers are glad to see branches of United States industries established on this side of the line, as well as the influx of United States settlers to our farming lands of the West, and if the present low tariff has had the effect of commencing a movement in this direction, how much greater will be the benefits to Canada in this respect when our tariff wall has been raised sufficiently high to give Canada the full benefit of her own commercial possibilities. The *Buffalo Manufacturer* says:

"A direct result of the fiscal barriers that hamper the trade between this country and Canada, is the constant drifting of American capital into the Dominion. More and more, every day, it becomes the plan of the American manufacturer who desires to reach the Canadian markets, to open up a branch on the other side of the border, with the sole purpose of escaping the harassing duties that would otherwise face him, did he export his goods from the home plant direct. Large and small, in all lines of business, manufacturers from this side are rushing up factories in the Dominion, and taking with them capital that under other conditions would be distributed in the United States.

"The importance of this view of the fiscal relations of the two countries is brought home very forcibly when consideration is given to the fact that great corporations in the United States are spending millions of dollars upon the erection of new plants in the Dominion which, but for the obstructing tariffs, would

have been located in this country. [At the present time, the United States Steel Corporation is giving attention to the establishment, on the Canadian side of the St. Clair River, of a \$10,000,000 steel plant, the only apparent reason for which is that the company is desirous of getting its steel and iron into the markets of Canada without having its profits sliced off by the high tariff barrier that Sir Wilfred Laurier is putting up against the American manufacturer.

"Canada is a country of great opportunities with a splendid future ahead, and nobody recognizes this more fully than does the widespread American, as is amply evidenced by such an instance as the recent location in Montreal of Allis-Chalmers-Bullock, Limited, every name of which hyphenated combination is a synonym for American enterprise, or the fact that, from four States of the Union alone, the enormous number of thirty thousand people a year are moving up into the rich wheat districts of Manitoba. Field and factory in Canada are attracting large numbers of Americans, and, while this immigration is in the natural order of things, and perhaps inevitable, yet the cold fact remains that much of the labor and a vast amount of the capital that is going into Canada now could be retained in this country if Congress would set itself the task of cutting down or abolishing altogether the clumsy tariff barriers that stand in the way of the trade of the United States."

CANADA AND JAPAN.

THE treaty of peace between Japan and Russia and the new treaty of alliance between Britain and Japan will probably ensure a long period of peace in the countries bordering on the Pacific Ocean, and an immense development of trade may be expected. The Pacific coast of Canada lies opposite to Japan. Canada is, in fact, Japan's nearest civilized neighbor, for Siberia can scarcely be called a civilized country. In the great expansion of Japanese commerce which is about to begin, Canada should have a larger share than any other country if we take full advantage of our geographical situation.

For some time past there has been a tariff discrimination against Canada which was a serious obstacle to trade between the two countries, but the Canadian Government has now completed arrangements with Japan for the removal of this discrimination, and Canadians are no longer at a disadvantage. The long railway haul to the Pacific coast will no doubt make it somewhat difficult for most of the manufacturers of Eastern Canada to export extensively to Japan, but the manufacturers of British Columbia will be in a peculiarly advantageous position for trade with their neighbors across the ocean.

✓ NORTHERN ONTARIO.

THE construction of the Grand Trunk Pacific Railway through Northern Ontario will open up to settlement a vast country having a farming area almost as great as that of Southern Ontario, besides mineral areas of unknown value, which may yield even greater wealth to the Canadian people than the farm lands. Prosperous communities will soon grow up in that region and those manufacturers who are the first to supply their wants will get a strong foothold there, provided the goods sold to settlers are satisfactory. It will pay our manufacturers to study the wants of these new communities and endeavor to supply them. It will be worth while also to consider what the railway contractors and the men employed by them will require. There may be articles not now made in Canada which will be in sufficient demand to warrant the establishment of new industries. There should be no excuse for going abroad for anything that can be supplied in Canada, but if our own manufacturers do not offer what is wanted the contractors are not likely to make any special effort to get their supplies in Canada.

ROYAL COLONIAL INSTITUTE.

AMONG the many courtesies of membership extended by clubs and institutions in Great Britain to the Canadian manufacturers' excursionists those of the Royal Colonial Institute gave special pleasure. It was not generally known that the Institute was founded in the year of Confederation, though such is the case. It was moreover founded by colonials for colonial propaganda in the Old Country from a colonial standpoint, and as such the Institute has special claims to the regard and the practical sympathy of colonials from every part of the Empire. To its pioneer work is due largely the rising tide of intelligent interest in things colonial which is daily becoming more visible in Great Britain.

The premises of the Royal Colonial Institute are situated close to Trafalgar Square. There is a fine reading room and library, a special newspaper room, writing rooms, smoking room and other apartments. The distinguishing feature of the Institute is its splendid colonial library, the most complete and extensive in existence, rivalling even the British Museum in that respect besides being vastly more accessible. Some 400 of the best newspapers from every part of the Empire are also regularly on hand. The annual subscription to non-residents is \$5. There is an entrance fee of the same sum. All the members are supplied with the monthly magazines, and with a bound volume of the proceedings of the Institute every year. The membership has risen steadily to 45,000, and it appears that two-thirds are non-resident members, i.e., those who live in the colonies. South Africa now supplies the largest membership, followed closely by Australia and New Zealand. The West Indian members are also numerous relatively. Canadians, we regret to find, are not closely identified as members, although a large proportion of the work done benefits Canada, and it seems almost incredible that their number should hardly amount to one hundred. We believe that Canadian manufacturers visiting London will find a visit to this useful and purely colonial institution to be most interesting, and we trust that in the future Canadians generally will accord to it more generous support. The honorary corresponding members in Canada are: Sir Sanford Fleming, Winnipeg; W. George Hague, Montreal; J. T. Small, Toronto; Judge J. W. Longley, Halifax N.S.; Thomas Robinson, Winnipeg, and Dr. E. C. Hannington, Victoria, B. C., by whom further particulars will be gladly supplied.

✓ TARIFF REVISION.

THERE are many evidences of the need for the forthcoming revision of the Canadian tariff. Throughout Canada a measure of general prosperity obtains, but the reports indicate that business conditions are not as favorable as they were a year ago.

While bank statements have been favorable, collections in both wholesale and retail trade are slow. Among the factories orders are not as plentiful as they were a year ago. The importations continue steadily to increase in spite of the partial relief afforded by the "anti-dumping" regulations. A number of Canadian industries, notably the lumber and woollen industries, are actually depressed, and such depressions influence whole districts and affect many other industries. Conditions are ripe for the work of the Tariff Commission.

The value of pleasant environments as an aid to excellence in workmanship is well understood by the Britannia Mfg. Co., Ltd., of Halifax, who, to accommodate increased trade have lately moved into new and more spacious premises near the harbor. The new plant, besides being replete with modern equipments of all kinds, commands from three sides a fine view of the sea and harbor, is splendidly lit and ventilated, and is withal one of the healthiest workshops of the Dominion. The company now employs over sixty women and have work for more if they could be had.

Executive Council

AUGUST MEETING.

Annual Meeting Arrangements—Success of the Transportation Department—Amendment to Constitution Affecting Membership Qualifications—South African Preference—Assistance to Tariff Commission—Visit from Mr. J. S. Larke, Canadian Government Commercial Agent to Eastern Australasia—Invitation to Government of Australian Commonwealth to send Customs' Official to Canada—Association's Thanks for Entertainment in Great Britain and France.

The regular monthly meeting of the Executive Council of the Canadian Manufacturers' Association was held in the Council Chamber, Board of Trade Building, Toronto, on Thursday, August 17, 1905, at 2 p.m.

Mr. W. K. George, President of the Association presided, and the following other members were present:—C. C. Ballantyne, C. A. Birge, Geo. Booth, J. W. Cowan, John Dick, G. E. Drummond, L. V. Dusseau, P. W. Ellis, J. D. Flavelle, Geo. D. Forbes, Jas. Goldie, W. P. Gundy, Lloyd Harris, E. G. Henderson, J. Hewton, D. T. McIntosh, J. S. McKinnon, R. McLaughlin, W. K. McNaught, J. P. Murray, Thos. Roden, A. S. Rogers, A. F. Rutter, Alex. Saunders, J. T. Sheridan, T. H. Smallman, T. A. Staunton, A. W. Thomas, J. O. Thorn, C. R. H. Warnock, C. H. Waterous, S. M. Wickett.

The President in opening the meeting expressed his pleasure at returning to the work of the Association at home.

Minutes.

The minutes of the previous meeting as published in the last issue of INDUSTRIAL CANADA were approved.

Communications.

Letters of regret at being unable to be present at the meeting were received from Messrs. G. E. Amyot, (Quebec); Col. Gartshore, (London); J. M. Taylor, (Guelph); R. O. McCulloch, (Galt), and J. A. Publow, (Hamilton).

Reports.

The reports of Officers and Committees were then received as follows, and upon motion were regularly adopted:—

Secretary.

The Secretary reported his return from the British tour, and his satisfaction at finding the work of the Association so well carried on during his absence.

Arrangements for the Annual Meeting were now in preparation. The programme which had already been printed included a great many attractive features, and the Committee were endeavoring to provide ample time for the careful discussion of all the important business to come before the meeting.

The work on the new addition of the Canadian Trade Index was well advanced. The members were being visited personally, in the West by Mr. G. M. Murray, editor of INDUSTRIAL CANADA, and in the East by Mr. B. L. Anderson, the Advertising Manager.

The season had arrived for the meetings of the Branches. The Toronto Branch had already met, the Montreal Branch was preparing for its meeting, on the 24th inst., the Nova Scotia Branch for its meeting on the 23rd inst., and Quebec for its meeting on the 28th inst. In the West the Branch meetings in both British Columbia and Manitoba were being held in connection with Mr. Murray's visit.

The report closed with a brief reference to the work to be undertaken in connection with the forthcoming revision of the tariff.

Treasurer.

Mr. George Booth, the Treasurer of the Association presented the monthly statement showing the finances of the Association at the close of the financial year.

Finance Committee.

The report of the Finance Committee was presented by Mr. J. O. Thorn. It provided for the regular monthly expenditure, and recommended that a special grant of \$50.00 be placed at the disposal of the Manitoba Branch of the Association for necessary expenses in connection with their Annual Meeting.

Railway and Transportation Committee.

The report of the Railway and Transportation Committee was presented by the Vice-Chairman, Mr. W. P. Gundy. This report is published in another column. Members of the Executive Council expressed their satisfaction at the splendid work being accomplished by the Department, particularly with reference to the readjustment of the Canadian car service and the new demurrage rules.

Reception and Membership Committee.

The report of the Reception and Membership Committee was presented by the Vice-Chairman, Mr. L. V. Dusseau. It recommended for acceptance 24 applications for membership as published in another column.

The Committee also reported that a special sub-Committee had been requested to bring in an amendment to the present Constitution respecting the qualifications for membership in the Association. The new By-Law as finally recommended by the Reception and Membership Committee is as follows:—

"Active membership in the Association shall be open to individuals, firms and corporations actively engaged as manufacturers in the Dominion of Canada; and when such individuals, firms and corporations are not engaged exclusively in manufacturing it shall be the duty of the Reception and Membership Committee of the Association to decide and report to the Executive Council whether the manufacturing interests represented in each case are proportionately large enough to warrant the acceptance of the application."

"Members may have more than one representative provided that the individual representatives named in each instance are actively engaged with and give the greater portion of their time to manufacturing industries."

The Committee also recommended that the clause in the present By-law providing for proposer and seconder for each application for membership should be struck out.

Considerable discussion took place with regard to the finding of the Committee upon the subject of membership qualification. Mr. J. P. Murray suggested certain changes in the amendment with the additional inauguration of another class of members to be known as "associate members." Discussion followed in which Messrs. J. O. Thorn, John Dick, J. P. Murray, C. A. Birge, and R. McLaughlin took part. The amendment made by Mr. J. P. Murray and seconded by Mr. Thos. Roden was defeated, and the report of the Committee adopted, Mr. Murray dissenting.

Commercial Intelligence Committee.

The report of the Commercial Intelligence Committee was presented by the Chairman, Mr. A. S. Rogers.

The most important matter dealt with was the proposed extension of the South African preference so as to benefit the industries of the Dominion. The preference now granted by South Africa does not apply to articles bearing specific duty, or to goods upon the free list, and it so happens that those commodities which Canada can best export fall under either one or the other of these lists. The Committee reported that an effort was now being made to bring about the desired extension, and that any influence in the power of the Association would be exerted in that direction.

The report also recommended that the Executive Council should be respectively requested to have the Association resolutions for consideration at the Sixth Congress of the Chambers of Commerce of the Empire submitted not to the Annual Meeting, but at a later date to the Executive Council of the Association. The Annual Report of the Committee had been prepared and finally adopted for submission to the Annual Meeting.

Fire Insurance Committee.

The report of the Fire Insurance Committee was presented by the Vice-Chairman, Mr. J. P. Murray. It was followed by a discussion and a vote upon the recommendations made in the report which were adopted almost unanimously.

Tariff.

Mr. W. K. McNaught, Chairman of the Tariff Committee made a brief report referring particularly to the assistance to be extended by the Association in assisting the Tariff Commission to secure all possible information with regard to the condition of Canadian industries at the present time. It was unanimously agreed that this work should be taken up where necessary through the sections of the Association, that the work of the Commission might be facilitated and the best results secured for the whole country.

The presentation of this report was followed by an interesting discussion in which Mr. Henderson stated that provision should be made so that while the sessions of the Commission were to be public, opportunity should be given for presenting confidential information in a confidential way. It was felt that this feature could and would be arranged by the Tariff Commissioners in their investigations.

It was the pleasure of the Executive Council to have present with them at this session for a short time, Mr. J. S. Larke, Canadian Government Commercial Agent in Eastern Australasia, and Mr. Larke on being called upon, expressed his pleasure at returning again to Canada and his desire to assist the manufacturers of the Dominion to the fullest extent in placing their goods upon the Australian market. It was following Mr. Larke's address that a message was forwarded to the Government of the Australian Commonwealth, stating that if that Government should appoint a representative Customs Officer to visit Canada and supply the Australian Customs Department with important information respecting Canadian prices, that the Association would give such officer as much assistance as possible. The motion authorizing the forwarding of the message was unanimously agreed to by the Executive Council.

On motion of Mr. Booth, seconded by Mr. Birge, the sincere thanks of the Association was directed to be forwarded to Lord Strathcona, the London Chamber of Commerce and all others who had assisted in entertaining the Canadian Manufacturers' Association party during their tour in Great Britain and France.

Branches.

The reports from the Branches at Montreal and Toronto were then presented and received, the former being read by Mr. C. C. Ballantyne, and the latter by Assistant Secretary Stewart. The meeting then adjourned.

RAILWAY AND TRANSPORTATION COMMITTEE.

The regular monthly meeting of the Railway and Transportation Committee was held on Wednesday, the 16th inst. A review of the month's work was presented, showing the various matters dealt with by the Department since our last meeting. These embodied a number of very important decisions—decisions which will affect manufacturers and shippers in every part of the Dominion. The more important questions involved were the following:—

Demurrage.

After a great deal of procrastination on the part of Canadian railway companies, and finally under pressure from the Board of Railway Commissioners for Canada, the Canadian railways have re-organized their whole system of dealing with car service and have actually agreed to complete new set of regulations on the subject of car demurrage. The whole ques-

tion of car service will be taken from the authority of the traffic department of the railways and organized under a central management to be known as the Canadian Car Service Bureau. Inspectors will be placed throughout the various districts, conveniently located, so that in case disputes arise matters may be adjusted with haste and satisfaction.

The new rules have been unanimously agreed upon by the representatives of the Canadian railways and this Association. They are now awaiting the approval of the Board of Railway Commissioners.

Interchange Switching.

Since our last meeting, the Board of Railway Commissioners have issued judgment in connection with the London inter-switching case. The judgment, which is a very lengthy and comprehensive one, is intended doubtless to be a leading case. It will be found elsewhere in this issue.

Dominion Millers Export Rate Case.

A decision has also been given by the Board in what is known as the Dominion Millers' Export Rate Case, which was presented jointly by this Association and the Dominion Millers' Association. As a result of the decision, the railways will be required to entirely revise the basis heretofore used by them in arriving at export rates from Ontario points to the Atlantic seaboard. The new basis will mean reductions, of course; and, so far as Montreal is concerned, so long as the railways give a differential under the New York rate on traffic originating at United States points, a similar differential must be given to Montreal on traffic from Canadian points.

Classification Rules.

It is expected that the Board of Railway Commissioners will visit Western Canada next month, and they will receive evidence upon the subject of classification should such be offered at any of the points visited. Your Manager of Transportation will appear before the Board at Winnipeg to conduct representations on behalf of the members.

The railways have given notice of certain changes to be made in classification in the near future. The interested members have been notified of the proposed increases, and, where necessary, the Department will file protest with the Board against their approval.

Traffic Forms and Contracts.

This matter is in abeyance. We are prepared for the conference to be held between the traffic and legal representatives of the railways and the Board of Railway Commissioners, but owing to so many of the legal and traffic representatives of the railways and the members of the Board being on vacation, apparently nothing can be done in this matter until next month.

Other matters receiving attention during the month have been: British Columbia Commodity and Class Rates, New York Competition on Export Traffic via Montreal, and Equalization Allowances. On the latter subject a judgment has been issued by the Board of Railway Commissioners in the case of the Brant Milling Company, which makes it clear that reductions or allowances by railways in favor of particular firms or persons cannot be allowed under the Act.

Gigantic Milling Concern.

The Western Canada Flour Mills Company into which have been recently merged the Goderich Milling Company and the A. Kelly Milling Company, of Brandon, has recently purchased from the McHugh Christensen Company, their elevators at Chatter, Pendennis, Yorkton, Indian Head, and Crandall, and are about to build a mammoth mill and elevator, either in Winnipeg or St. Boniface. They have also secured building privileges at Veregine, Quill Lake, Mikado, Canora, Invernay, Wadena, Englefeldt and Muenster, and have made application for like privileges at Aberdeen, Clarkbow, Warman, Elbow, Goderich and North Battleford. The company at present have a chain of forty-nine large elevators in operation, and when their system has been completed, it will be one of the largest in the world. Their manufacturing capacity, when their new mill is running, will be 6,500 barrels of flour per day.

NOVA SCOTIA BRANCH ANNUAL MEETING

THE annual meeting of the Nova Scotia Branch of the Canadian Manufacturers' Association was held in the Board of Trade rooms, Halifax, at 8 p.m. on Wednesday, August 23, 1905. Among those present were: Messrs. Alfred Dickie, Chairman, J. P. Edwards, Andrew Mackinlay, John P. Longard T. M. Cutler, William Levis, Frank C. Simson, A. H. Whitman, James Anderson, S. S. Shatford, Henry Flowers, William Dennis, L. J. Mylius, F. J. Fraser, George E. Faulkner, J. E. Wood, and J. F. M. Sterawt, Assistant General Secretary of the Association.

Minutes of the last annual meeting read and approved. The President, Mr. Alfred Dickie, presented a verbal report dealing with the work of the year. In the course of his address he referred to a number of subjects of importance to the Association, among others, insurance, labor legislation at Ottawa and the visit of the Canadian Manufacturers to Great Britain. Mr. Dickie traced the advance which manufacturing industries had made in the various countries of Europe and spoke enthusiastically of the future for manufacturers in Canada.

Secretary Wood's Report.

Mr. Wood's report as Secretary of the Branch for the year 1904-05 was confined to a brief review of the business transacted, and is here given only in part. Since the last annual meeting eight meetings were held at which the requisite quorum was present, and in addition to the general meetings, meetings of the sub-committees have been held as occasion required. The Branch has been fortunate on several occasions in the visits of General Officers of the Association, who have through the year spent some days in the Province, calling upon members and enlisting their interest in the splendid work which the Central Association is doing for its members throughout Canada. Mr. W. M. D. Miller, then Manager of the Transportation Department, was in Nova Scotia in the early part of November and a meeting of the Branch was held at which he explained fully the work of the department. He also visited a number of the members in the city and province and was instrumental in straightening out many transportation difficulties directly affecting the business of the complainants.

Mr. R. J. Younge, the General Secretary of the Association, has made two visits to the province since the last annual meeting. A call from Mr. Younge always results in additional enthusiasm in the work of the Association and an added appreciation of its benefits.

Dominion Exhibition.

The application of the Provincial Exhibition Commission for the Dominion Exhibition of 1905, has been successful and the big Dominion show will be held in Halifax next year.

Early in the year this Branch approached the Government asking that Halifax receive the grant for 1906, endorsing the request of the Exhibition Commission. It is gratifying to note that the efforts of this Branch in this important matter have been crowned with success. It is expected that there will be a large and representative display by Canadian Manufacturers, and provision is made for a material extension of the present accommodation. Having been largely instrumental in obtaining the exhibition for Nova Scotia, it is incumbent on the members of this Branch to rally to its support and uphold the credit of the province by displaying its output of manufactures to the best possible advantage.

On the invitation of the Exhibition Commission, a Committee of three from this Association was appointed to co-operate with a like Committee from the Commission itself, the Board of Trade and the City Council in devising ways and means to successfully carry out the undertaking.

Matters of importance which have engaged the attention of the Branch during the year may be enumerated briefly:

(a) Limitation of tariff preference to goods entering through Canadian ports.

A resolution urging the above restrictions was forwarded to the Dominion Government and to the General Executive of the Association, with a request for co-operation. The matter has since had the consideration of the General Executive who have reported their adherence to the principle sought to be put into effect but did not consider the time ripe for definite action.

(b) Government control of telegraphs.

The Branch expressed itself as favoring Government acquisition and control of telegraph lines in Canada.

(c) Cost of coal to manufacturers.

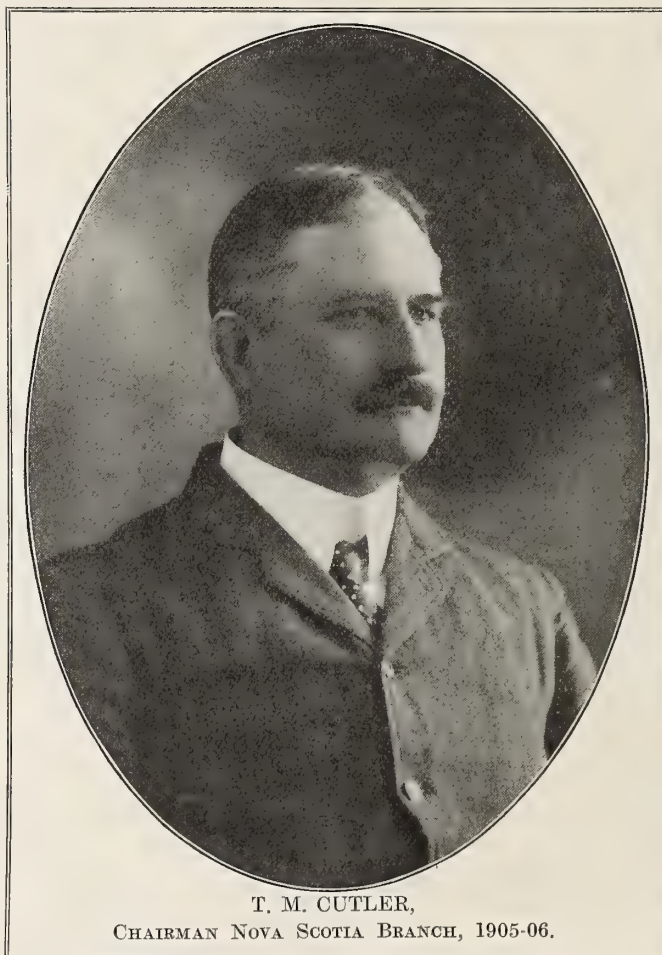
Representations were made that the cost of coal to Nova Scotia consumers was at least \$1.00 a ton greater than coal delivered in Montreal. The matter had full discussion at a meeting of the Branch and a Committee is now outstanding for the purpose of obtaining exact information, with a view to securing, if possible, a removal of the discrimination.

(d) Express Companies.

By resolution, the Branch urged the placing of Express Companies under the operation of the Board of Railway Commissioners.

(e) Trade Commissioner to Mexico.

In view of the growing trade with Mexico and the additional opportunity for business afforded Canadian manufacturers through the subsidizing of a line of steamers by the Canadian and Mexican Governments, it was considered desirable that a



T. M. CUTLER,
CHAIRMAN NOVA SCOTIA BRANCH, 1905-06.

trade Commissioner to Mexico should be appointed, and the Government was urged to make the appointment. An appointment of a Commercial Agent has since been made.

(f) Permission to enter suit against I. C. R.

Request was made that the necessity of obtaining such permission be removed.

(g) Extension of franchise to incorporated companies in Municipal, Provincial and Federal affairs.

Resolution passed advocating such extension. As the Provincial Legislature had then risen, no further action was taken for the time being.

(h) Duty on lumber.

At the request of the British Columbia Branch, a resolution of this Branch was sent to the General Secretary to be forwarded to the Government urging the imposition of \$2.00 per M. on rough lumber and 30 cents per M. on shingles and laths.

The Executive Committee has also discussed a proposal from the Quebec Branch, that this Association move toward the abolition of the Provincial tax on the extra Provincial Corporations. The suggestion was that the arrangement be reciprocal through all the provinces of the Dominion, thus removing a barrier to inter-provincial trade. The matter is still in the hands of the Executive.

Appointments.

During the year, T. M. Cutler has been appointed the representative of this Branch on the General Insurance Committee of the Association, and Alfred Dickie to the vacancy on the Executive Council caused by the death of the late John F. Stairs. James Eastwood of New Glasgow was appointed to the Executive Committee of the Branch to serve the unexpired term of James Munro who has removed from the province.

In connection with the representation of the Executive Committee of the Branch, I would suggest that the course be adopted in vogue in other branches; viz., That the ex-presidents of the Branch should serve ex-officio as members of the Executive Committee.

Nine members have been added to the Branch since the last annual meeting, and one member has resigned. The membership now stands at ninety-four.

In closing his report Mr. Wood expressed his pleasure in having present Mr. J. F. M. Stewart, the Assistant Secretary of the Central Association, and expressed to Mr. Dickie, the President, and to the members of the Executive Committee his thanks for the noble-hearted way in which they had labored with him in the work of the year, making his task more pleasant and his efforts more efficient. He added also a word of regret that the requirements of his business render it imperative that he should resign office at this time.

On motion, the reports of the President and Secretary were received and adopted.

Ex-Officio Members.

Moved by Mr. Frank Simson, seconded by Mr. J. P. Edwards, and passed:

"That the Chairman of the Nova Scotia Branch of the Canadian Manufacturers' Association after their retirement from the chairmanship be, for one year, ex-officio members of the Nova Scotia Executive."

The New Officers.

Messrs. Mackinlay, Longard, Flowers, Edwards, Anderson and the Secretary were appointed a committee to nominate officers and committees for the ensuing year.

The Committee reported the following nominations:

Chairman,—T. M. Cutler, Acadia Sugar Refineries Ltd., Halifax.

Vice-Chairman,—W. J. Clayton, Clayton & Sons, Halifax.

Executive Committee,—Henry Flowers, Levis Hart & Son, Ltd., William Levis, Robt. Taylor Co., Ltd., Frank C. Simson, Simson Bros., Ltd. N. B. Smith, Smith & Proctor, F. J. Ward, John P. Mott & Co., J. R. Henderson, Henderson & Potts, F. J. Fraser, Davis & Fraser, I. C. Stewart, Imperial Publishing Co.,

Ltd. and A. F. Pelton, Rhodes, Curry & Co., Ltd., Halifax; J. P. Edwards, Londonderry Iron Works, Londonderry; H. L. Hewson, Hewson Woollen Mills, Amherst; James Eastwood, New Glasgow; H. M. Bayne, N.S. Carriage Co., Ltd., Kentville; Graham Fraser, Dominion Iron and Steel Co., Sydney; H. H. Hamilton, H. H. Hamilton & Sons, Pictou.

Nova Scotia Vice-President of Association, D. W. Robb, Robb Engineering Co., Ltd., Amherst.

Representatives on the Executive Council of the Association: Alfred Dickie, Lower Stewiacke; S. R. Crockett, I. Matheson & Co., Ltd., New Glasgow; H. L. Hewson, Hewson Woollen Mills, Amherst; J. R. Henderson, Henderson & Potts, Halifax; B. F. Pearson, Halifax, N.S.; Graham Fraser, Dominion Iron & Steel Co., Sydney.

On motion, the report of the Committee was received and adopted.

Assistant Secretary, C. M. A.

Mr. J. F. M. Stewart, the Assistant Secretary of the Manufacturers' Association, then addressed the meeting.

Mr. Stewart referred briefly to the appointments made and expressed his gratification that Mr. Cutler had accepted the office of President for the ensuing year. He referred, in the course of his remarks, to the work of the Association throughout the year, particularly in the Departments of Transportation and Insurance and also outlined the work of the Legislative branch of the Association.

Mr. Stewart's remarks were highly interesting and instructive, enabling the Nova Scotia members to obtain a comprehensive view of the splendid work done by the General Association during the year.

He referred briefly to the visit of the Association to Great Britain and extended an invitation to every member of the Branch to be present at the Annual Convention to be held this year in Quebec.

At the close of his remarks, Mr. Stewart answered a number of enquiries regarding the general work of the Association.

The Chairman Elect.

The retiring Chairman, Mr. Dickie, introduced the Chairman elect, Mr. T. M. Cutler, who was enthusiastically received. Mr. Cutler in a few words thanked the meeting for his election although the office was not of his seeking, and promised the work of the Association his best attention during the ensuing year.

The following resolution, moved by Mr. Frank C. Simson, seconded by Mr. S. S. Shatford, was passed:

"Resolved, that the Branch hereby expresses its appreciation of the services rendered the Branch and to the General Association by the retiring Chairman, Mr. Alfred Dickie, and his Executive Committee, and also expresses its regret that Mr. J. E. Wood, who has been an efficient and painstaking Secretary finds, owing to other duties that it is impossible to continue as Secretary of the Branch.

Mr. Stewart referred to the retirement of the Secretary and stated that the Association had under consideration several applications and expected to be able in a short time to report the appointment of a suitable man.

A new binder twine is shortly to be put on the market by the Commercial Binder Co., of Galt. It is entirely different to anything now in use. Instead of being composed of a number of loose strands, it resembles cat-gut, and is said to be cheaper and stronger than ordinary twine. The company will also have the sale for Canada of the Goff Binder, a machine for doing away with the use of twine in fastening up packages. This machine feeds out a strip of a gummed, specially-treated paper, and not only automatically moistens the gum on it, but at the same time prints on the tape any desired advertisement or trade mark. The strip is then applied to the loose ends or flaps of the paper which the parcel is wrapped in and the trick is done. The new material will also be turned into packages, pails, etc., for holding meats, fruits, liquids, paints, oils, etc., which will be water-proof, vermin-proof, and air-tight.

TORONTO BRANCH ANNUAL MEETING

THE Annual Meeting of the Toronto Branch of the Canadian Manufacturers' Association was held in the Association Rooms, Toronto, on Thursday, August 10th, at 2 p.m. Mr. Richard A. Donald presided, and the meeting was well attended.

Minutes of the last Annual Meeting, which were published in full in September, 1904, INDUSTRIAL CANADA, were taken as read.

Different reports were then presented, as follows:—

Niagara Falls Power.

Mr. P. W. Ellis, who has been acting on the Niagara Falls Power Commission as the representative of the Toronto Branch, reported fully regarding the progress of the work undertaken. Mr. Ellis dealt fully with the origin of the investigation and the progress of the enquiry. The concluding part of his report which suggests what may be expected when the report of the Commission is brought down was as follows:—

"Estimates of the total power consumed and required in the

adapt the report to the widest range of interests that the present stage of electrical development permits.

"*Anticipated Effects.*—It may be predicted with every confidence that the publication of this report will have the following among other effects:—

"(a) It will educate the public authoritatively on the question of electric power values. The only aspect of the matter that is at present free from uncertainty is that steam and electric power under existing conditions are high in price no matter how economical the development may be.

"(b) It will educate the public upon the great influence of cheap power upon the trade and commerce of the Province.

"(c) It will in consequence help in the creation of a body of well informed public opinion that will ultimately insure to the people of the Province the full benefits of the Provincial water powers."

Secretary's Report.

The Secretary, Mr. J. F. M. Stewart, reported on the membership and meetings of the Branch. The Branch was organized in July, 1900, with 225 members, the following year it had increased to 275; in 1902, it was 272; in 1903, 331; in 1904, 395, this year 497, showing a net gain of 102, or the largest annual increase in the history of the Branch.

He reported also that the Executive Committee had held ten meetings. Mr. J. P. Murray was present at all the meetings. Messrs. R. A. Donald and S. B. Hart attended 9 each, Mr. J. S. McKinnon 8, Mr. P. H. Burton 7, Mr. C. B. Lowndes 6, Messrs. J. O. Thorn, W. P. Gundy, Geo. C. Gale, R. Crean, E. Freyseng, and W. B. Tindall 5 each. The other members of the Executive attended less than one-half the meetings.

Chairman's Report.

Mr. Richard A. Donald, the Chairman of the Branch, in addition to giving an account of the different matters dealt with during the past year, made some important remarks on public questions that are now before the city for consideration. Mr. Donald's report was as follows:—

To the Members of the Toronto Branch,
Canadian Manufacturers' Association.

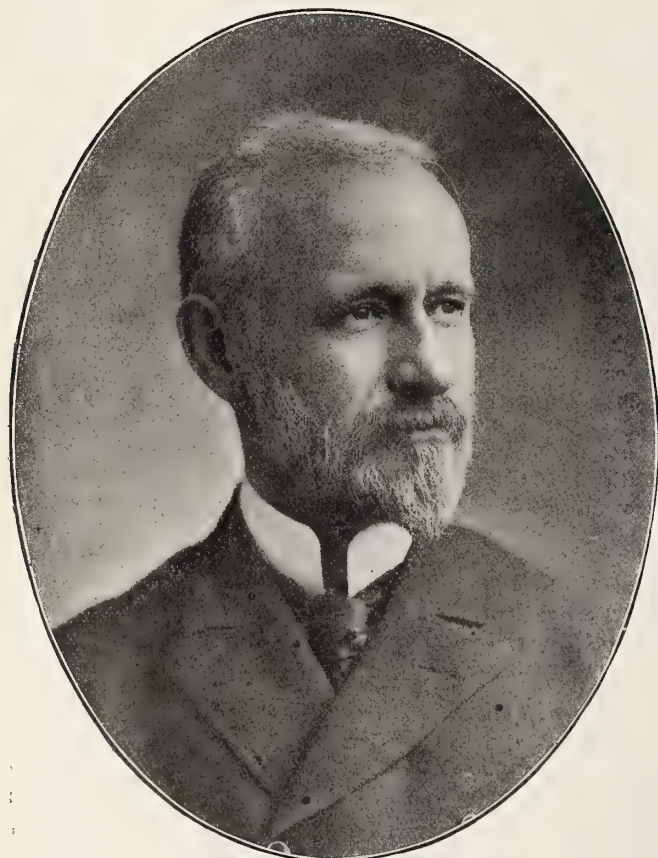
Gentlemen,—In giving you a report of the work of your Executive for the past year I do not think it out of place to refer briefly to a few questions of first importance to our city. Truly, we have a city that we are all proud of, and proud to show to visitors, but, with this the case, it would be most unfortunate if we did not face our shortcomings.

The Trunk Sewer.

The manufacturing interests in common with every other interest demands instant attention to the problem of the proper disposal of the city sewage. Surely the time has arrived when this great work can be inaugurated. It takes so many years to finally accomplish any work of magnitude that a start might safely be made. Navigation interests, growing rapidly more important; health preservation, our best advertisement, and Don and marsh developments, all demand the instant and persistent attention of our civic authorities to this great enterprise.

The Straightening of the Don.

It is now considerably over a year since the Toronto Branch urged upon the city the necessity for straightening the river Don. A statement of the conditions which only takes \$60,000 to rectify were presented to the City Council, and also to the Dominion Transportation Commission. Nothing has been done. If the Government refuses to do the work until the sewage problem is solved, our opportunities for harbour improvements are going to be delayed some years and, in the meantime, Toronto offers no inducement to the much more numerous and larger vessels that are being put into commission on the lakes.



W. B. TINDALL

Chairman Toronto Branch, 1905-06.

municipalities represented, have been made and tabulated, the cost of development at Niagara Falls adequate to supply the total requirements thus brought to light, also the cost of a transmission plant and all other necessary works involved in meeting the consumers' needs are nearing completion.

The highest expert and technical knowledge available has been employed to determine the best mode of development and transmission. The cost of power so developed and transmitted under ideal working conditions and free of all charges of the nature of private profits is being computed, and it is hoped by the month of November the work of the Commissioners will be complete and a well considered and reliable report will be placed in the hands of the municipalities, and through them in the hands of the general public. No effort has been, or will be, spared to

The Radial Railway.

The matter of incoming radial railways is very important, and no opportunity should be lost of encouraging these desirable adjuncts to modern city and suburban life. At the same time no greedy corporation should by any means obtain rights which eventually are to be used as a lever to render more valuable interests which at present are clearly defined.

Toronto is possessed of a really good street car service despite its many shortcomings, but Toronto is, because of the manipulations of the owners of that franchise, away behind other places in the matter of radial railway accommodation.

The Front Street Expropriation.

Too much blame cannot be forced on all concerned regarding the lamentable delay over the Front Street Railway Station site. That a year and a half should be allowed to elapse without some tangible showing of progress is not creditable nor profitable. What is the real trouble in all civic delays? Cannot some method be evolved looking towards the doing away with this reproach? On all hands are evidences of it, our wharfs, our bridges, our shelters, our every convenience for which we have ample money to pay, take months and years to materialize.

The City Beautiful.

Many, many thanks to the architects and others who are so unselfishly striving to produce a plan to which this city shall work for all time to come. It may take 20 years and much money, but far better ten dollars spent wisely and well than 100 spent without system. Our citizens are generously minded regarding really good and substantial progress. We cannot do things cheaply, not just now anyway. This is the building-up time, and as we lay foundations to-day just so will our fair city look in the years to come.

These few references may seem critical, but each and all of them go to show the business people of the city that we are living only in the present, and have yet failed to grasp the necessity for doing now these things in which delay costs the city much and complicates the undertakings.

Strength of the Branch.

There were 395 manufacturers in Toronto who were members of the Manufacturers' Association when our Annual Meeting was held in 1904. The Executive Committee decided at its first meeting that this number should and could be considerably increased, and it was decided then to increase it by at least 100. This we have done, our membership to-day being 497. To reach this total in addition to the personal work of members of the Association, a series of

Weekly Luncheons

were held. The members of the Branch were divided into five sections, and each section held three luncheons, fifteen in all. These were most enjoyable. They stimulated interest in the Branch work and, I believe, could be continued during the coming winter with profit.

We have held one Branch dinner. This was on the evening of the day of the Ontario elections, and the election returns were announced. The attendance was large and every one present was well pleased with the entertainment provided.

Taxes on Machinery.

This was the most important question the Branch had to deal with. The manufacturers in Toronto have not paid taxes on machinery (with the exception of school taxes) for the last thirteen years. The Municipal Act of the Province gave no power to municipal councils to extend this exemption to cover 1905, although when the new Ontario Assessment Act was passed it was understood that the exemption should be continued until this Act became effective. The Branch early in the year, requested the Board of Control to take action. The Board pointed out that under the law they had no power to recommend the exemption and the Branch found it necessary to go to the Provincial Government and ask for an amendment to the Municipal Act, which amendment was passed.

With this authority the request to the Board of Control was renewed, and after several interviews a by-law was passed by the City Council on June 26th, extending the exemption.

The machinery for manufacturers in Toronto is assessed for \$2,069,159, and the taxes for which exemption was secured amounted to \$26,896.96. We here wish to record our appreciation of the action of the Provincial Government, the Board of Control, and the City Council in complying with our requests.

Fire Insurance.

The investigations into the question of Fire Insurance which received much attention in 1903-4 has resulted in the organization of the Insurance Department of the Association. This department has already justified its establishment, and a number of the members of the Branch have used the services offered.

Fire Protection.

The Branch continued its efforts to secure improved fire protection. At the invitation of the Board of Control, two conferences were attended, at which the Board of Control, Board of Trade of Toronto, the Fire Underwriters and the Toronto Branch were represented, and at which the subject of independent water-mains was fully discussed. When the by-law covering the pro-



JOHN FIRSTBROOK

Vice-Chairman, Toronto Branch, 1905-06.

posed improvements was finally approved of by the City Council, the Branch, through the press, and by posters, called to the attention of the ratepayers, the necessity of supporting the same. They also asked the Board of Fire Underwriters to take a stand in its favor, but this request was not complied with. To the gratification of all, the by-law was passed.

The work in connection with this by-law and also the \$1,000.00 by-law approved of in 1903 is well under way. For the high pressure system, the erection of the pumping station has been commenced, and the contract has been awarded for the erection of the boilers. The tenders for the pumps, turbines, cast-iron pipe, hydrants and valves will be let next month.

Traders' Week in Toronto.

In conjunction with the Toronto Board of Trade an effort was made to secure reduced fares from the railway companies for a Traders' Week in Toronto. This Traders' Week has become a very important factor in the distributing trade of large cities in the United States, particularly in New York. There

the Merchants Association have been arranging Traders' Week excursions for some years back. The officials of the Canadian railways were interviewed in Montreal, but they did not grant our request. We were satisfied that many buyers who now go to United States centres could be induced by attractive railway rates to make buying trips to Toronto, Spring and Fall, and much business that now goes to the United States could be retained in Canada, to the particular benefit of the manufacturers, wholesalers and railways. We made it clear in our representations that we had no objection to the railways giving similar attractive rates to other distributing centres. We hope the railways will reconsider their decision in the near future.

Electric Power.

The transmission line from Niagara Falls to Toronto is now completed, and it is expected that power will be available within the next few months.

Our representative in the Ontario Power Commission, Mr. P. W. Ellis has, we are proud to note, been appointed one of a commission of three to enquire into the possibilities for water power all over the Province, and has also been appointed to the Niagara Falls Park Commission.

On Mr. Ellis' recommendations the Branch issued a letter to the members of the Association in Toronto, and in the different Ontario towns which were paying the expenses of the investigation, urging them to give the engineers of the commission all the information asked for.

The report of this Commission which will be published shortly will be received with a great deal of interest.

Coal from England.

At the request of British colliery owners six different grades of United States coal, such as is used every day in Toronto, were shipped to England. The colliery owners wished to see this coal and test it, the object being to investigate the possibility of shipping British coal to Canada. Copies of the analysis of the coal have been received, but as yet the final conclusions of the mine owners are not to hand.

City Department Work.

On the retirement of Mr. R. J. Fleming from the position of Assessment and Property Commissioners, your Committee expressed the opinion that the work could be divided to advantage and that Assessment and Property could well be separated. This division has been adopted by the City Council.

Technical Education.

Recognizing the importance of encouraging Technical Education, even although the Technical Education as we have it, does not begin to approach to what Technical Education in a manufacturing city the size of Toronto should be, the Branch have donated a number of text books which will be awarded to the students taking the highest marks in different departments at the school.

Regulation of Pawn Brokers.

The recommendations of the Branch urging the necessity for a better control of the business of pawn brokers were laid before the Provincial Government but were not acted upon. The question is an important one and the new Executive should place their recommendations before the Government in good time in order that an opportunity may be given to introduce legislation at the next session of Parliament.

Extension of the Branch.

At the request of the Executive Council the advisability of incorporating as members of the Toronto Branch, the members of the Association in near by towns, was investigated and it was decided that the time was not opportune for such action.

Toronto Civic League.

Under the auspices of the Employers Association, what is known as the Toronto Civic League has been organized. Different organizations in the city were invited to appoint representatives to the League, which invitation the Branch, along with other organizations, accepted. A number of important civic matters were considered by the League, and the Branch Executive has had the opportunity to consider them so as to instruct its delegates.

Telephone Systems.

The Select Committee of the House of Commons appointed to deal with the telephone service of Canada, asked the Association

for an expression of its views and the Parliamentary Committee which was dealing with the matter, in order to formulate recommendations, asked for the opinion of the different branches of the Association. The Toronto Branch expressed itself as follows:—

(1) That municipalities should have an absolute right to control the placing of wires within the city.

(2) That the trunk telephone lines should be owned by the Government.

(3) That all citizens resident in a municipality in which any company has established a telephone system, and who are prepared to pay for services, should be prepared with a telephone at whatever rate is established, and the same rate should apply to all.

(4) That all telephone companies should have equal rights in all railway stations.

Resolutions of the Branch.

The Branch has given expression to its views by way of resolutions on three matters of public importance, which views we hope meet with the approval of the members.

(1) Approving of immediate action to construct a trunk sewer for Toronto.

(2) Requesting the Government to put express companies under the jurisdiction of the Board of Railway Commissioners.

(3) Approving of the \$300,000 by-law for improvements at Toronto Exhibition.

In concluding this detailed review of the year's work, I wish, on behalf of the Branch, to acknowledge with thanks invitations received from the Insurance Institute and from the Society of Chemical Industry to lectures held under their auspices. I also wish to acknowledge the kindnesses shown the Secretary of the Branch and myself by the National Municipal League when attending its convention in New York.

Mr. Donald's report was received by the members present with much enthusiasm. Mr. W. P. Gundy, in moving its reception, took occasion to congratulate Mr. Donald and the members of the Executive on the success that they had met with and the great amount of work undertaken during the year. He coupled with his congratulations a vote of thanks, which, upon being put to the meeting, was unanimously carried.

The election of officers and committees for the ensuing year resulted as follows:—Chairman—W. B. Tindall; Vice-Chairman—John Firstbrook; Committee—H. W. Beatty, S. B. Brush, C. N. Candee, J. W. Cowan, P. W. Ellis, Ed. J. Freyseng, S. R. Hart, A. Jephcott, J. S. King, J. S. McKinnon, R. E. Menzie, W. H. D. Miller, John Northway, A. S. Rogers, Frank A. Rolph.

Ex-officio members (being past Chairman of the Branch), Messrs. W. K. George, J. O. Thorn, W. P. Gundy, J. P. Murray, and R. A. Donald.

Industrial Exhibition Association.

Representatives from the Toronto Branch on the Industrial Exhibition Association for the year 1906:—Geo. Booth, R. A. Donald, Chas. E. Edmunds, W. K. George, W. P. Gundy, Geo. Heintzman, H. McGee, W. K. McNaught, T. L. Moffat, Jr., H. G. Nicholls, F. B. Polson, T. A. Russell.

Executive Council, C.M.A.

The Branch nominated 33 members from Toronto to represent them on the Executive Council of the Association, as follows:—W. S. Alley, Geo. Anderson, P. H. Burton, C. N. Candee, R. J. Copeland, J. W. Cowan, Robt. Crean, R. A. Donald, Thos. Findley, John Firstbrook, Ed. Freyseng, Geo. Gillies, W. P. Gundy, S. R. Hart, Alf. Jephcott, J. B. MacLean, J. S. McKinnon, J. P. Murray, Frederic Nicholls, A. B. Ormsby, W. E. Phillips, A. T. Reid, Thos. Roden, A. S. Rogers, J. T. Sheridan, Jas. Sinclair, F. J. Smale, T. A. Staunton, Wm. Stone, A. W. Thomas, J. O. Thorn, John Turnbull, S. M. Wickett.

While waiting for the results of the elections as given above, the Chairman introduced to the meeting Mr. W. B. Tindall, who had been elected Chairman for 1906 by acclamation. Mr. Tindall thanked the meeting for the honor done him and gave his assurance that the Branch work would have all of his time that was necessary for the proper carrying out of the different matters that came before it.

A vote of thanks was moved to Mr. C. S. Meek and Mr. Geo. C. Gale, who acted as scrutineers.

The meeting then adjourned.

MONTREAL BRANCH ANNUAL MEETING

THE fifth annual meeting of the Montreal Branch of the Canadian Manufacturers' Association was held in the Reading Room of the Montreal Board of Trade, on Thursday and Friday, Aug. 24 and 25, 1905, with the chairman, Mr. Jno. J. McGill, presiding.

SESSION OF AUGUST 24.

The members present were:—Messrs. Jno. J. McGill, J. S. N. Dougall, C. C. Ballantyne, J. H. Birks, S. W. Ewing, Geo. E. Drummond, Geo. Esplin, Robt. Gardner, W. T. Whitehead, L. H. Packard, H. S. Stern, A. Desjardins, R. C. Wilkins, Jos. Fortier, J. E. Mathews, W. H. Lawson, A. H. Brittain, Geo. M. Edwards, Ludger Gravel, Wm. Bramley, W. P. Miller, Jos. Horsfall and Wm. Smaill.

The minutes of the previous meeting were taken as read.

The Chairman called upon the Secretary to read the report of the Executive Committee for the year. The report gave a resume of the various questions that came before the Executive Committee during the year, treating especially of municipal matters and provincial legislation, and referring to the retirement of Mr. E. H. Cooper from the Secretaryship of the Branch.

On motion of Mr. R. C. Wilkins, seconded by Mr. Jos. Horsfall, the report was unanimously adopted.

Chairman's Annual Address.

The Chairman then delivered his annual address. He referred to the increase in membership of the Montreal Branch from 308 to 368, and estimated that it now represented a capital invested in manufacturing industries of at least \$78,000,000. The industries of the city as a whole, had enjoyed a year of prosperity and activity, and with one or two exceptions freedom from labor disputes.

After referring to the splendid outcome of the British excursion, Mr. McGill proceeded to point out the necessity of establishing a technical school in Montreal which would give for a nominal charge, competent training to those about to enter upon industrial occupations. He urged the manufacturers to pledge their support towards the early foundation of such a school in Montreal.

Mr. McGill reminded the members that the incoming year would bring another civic election, and the members should make early preparation to give their influence and support for the return of men to the City Council who would place public interest above personal prejudice and petty patronage. The Chairman protested against the system of special taxation which prevailed in Montreal, and urged a reduction of the water rates for manufacturing purposes, and the adoption of an equitable scheme of taxation. He advocated an extra tax on realty so as to allow for the reduction in income which any of these changes might involve, and also provide additional revenue for the city's improvement.

In conclusion, the Chairman asked the incoming Executive to give consideration to the objectionable bills passed by the Quebec Legislature, imposing license fees on extra-provincial corporations and on non-resident commercial travellers who represent foreign houses. The latter tax had not benefited any existing industry and had created a bad impression abroad.

Mr. McGill referred to the retirement of Mr. E. H. Cooper from the Secretaryship of the Branch and to the satisfactory services rendered by him and his successor, Mr. Cameron.

Vote of Thanks.

Mr. Geo. E. Drummond moved a vote of thanks to the Chairman for his address, with a recommendation that it be printed and kept in the Association records. This was adopted amid applause.

In the course of his reply, Mr. McGill referred to the steps recently taken by the Government to export American silver coinage from this country. He reminded the Branch that one of their members, Mr. Wm. Smaill, had first brought this matter up in the Association with the satisfactory result just noted.

Travellers' Tax.

Mr. Jos. Fortier, referring to the travellers' tax, said that he was not in favor of taxing outsiders who came here to sell raw material for use in the manufacture of other goods, but he did believe that the man who sold \$50,000 worth of tea here should contribute something to the provincial revenue. The recent tax imposed by the Quebec Government on commercial travellers was not to be entirely condemned.

Mr. C. C. Ballantyne remarked that when in England he had heard considerable indignation expressed at this tax.

Mr. R. C. Wilkins remarked that commercial travellers were evading the tax by clubbing together and renting small offices which could be used as headquarters, and thus they could say

that they had a place of business in Canada.

The Secretary said that he had mentioned to Hon. Mr. McCorkill that commercial travellers could easily evade the tax by renting a small office. Mr. McCorkill had replied that almost every new law had some loop hole of escape, but by successive amendments it would be possible to prevent any escape by these means. In reply to a question, the Secretary said that the commercial travellers' tax had not yet been collected from anybody by the provincial authorities.

Resolutions.

Under new business, the following resolution was introduced by Mr. Geo. Esplin, seconded by Mr. R. C. Wilkins and carried:

"That the retiring Chairman of the Montreal Branch shall be ex-officio a member of the Executive Committee for one year from the date of his leaving the Chairmanship."



JEFFREY H. BURLAND,
Chairman, Montreal Branch, 1905-06.

Mr. McGill announced that Mr. Jeffrey H. Burland had been nominated Chairman for the coming year, and Mr. D. Lorne McGibbon, Vice-Chairman. There being no other nominations, these elections were made by acclamation.

On motion of Mr. J. H. Birks, Messrs. H. Stanley Cook and A. H. Brittain were appointed scrutineers to count the ballots cast for the election of the Executive Committee.

The Secretary read a telegram from Mr. D. Lorne McGibbon, Vice-Chairman-elect, expressing regret that he was unable to be present at the meeting.

The Chairman then called for nominations for representatives from the Branch to the Executive Council, after which the meeting was adjourned until 12 o'clock on the following day to receive the report of the scrutineers.

SESSION OF AUGUST 25.

The report of the scrutineers, Messrs. H. S. Cook and A. H. Brittain, was submitted, showing the results of the election to be as follows:—

Chairman,—Jeffrey H. Burland, elected by acclamation.

Vice-Chairman,—D. Lorne McGibbon, elected by acclamation.

Executive Committee,—J. H. Birks, S. S. Boxer, C. W. Davis, J. S. N. Dougall, Geo. E. Drummond, Geo. Esplin, S. W. Ewing, Robt. Gardner, Chas. B. Gordon, J. T. Hagar, J. J. McGill, Wm. McMaster, Robt. Munro, Hon. J. D. Rolland, G. W. Sadler, Clarence F. Smith, W. T. Whitehead, D. Williamson.

As, according to the resolution passed, Mr. McGill, the retiring Chairman was ex-officio a member of the committee for one year, room was left for another member to be appointed. On motion of Mr. J. S. N. Dougall, seconded by Mr. S. W. Ewing, Mr. W. P. Coleman, who had received the next highest number of votes was appointed to the vacancy.

On motion of Mr. S. W. Ewing, a vote of thanks was passed to the scrutineers for their work in counting the ballots, and on motion of Mr. Clarence F. Smith, a vote of thanks was passed to the Montreal Board of Trade for the use of its reading room for the purpose of the annual meeting.

The meeting then adjourned.

BRITISH COLUMBIA BRANCH ANNUAL MEETING

The Annual Meeting of the British Columbia Branch of the Canadian Manufacturers' Association was held at Vancouver on Thursday, August 31st, 1905.

Amongst those present were:—Messrs. R. H. Alexander (British Columbia Mills, Timber and Trading Co.), Chairman; Woods (Woods & Spicer), Hackett (Robertson & Hackett), McLennan (McLennan, McFeely & Co.), Patterson (Canadian Pacific Lumber Co.), Weaver (B. C. Wire and Nail Co.), Hinton (Hinton Electric Co.), Heaps (E. H. Heaps & Co.), and G. M. Murray, Editor of INDUSTRIAL CANADA.

The Minutes of the last Annual Meeting were read and approved.

Election of Officers.

Mr. John Hendry of the British Columbia Mills, Timber and Trading Co. was nominated as Vice-President for the British Columbia Branch of the Association for 1905-06.

Mr. R. P. McLennan was elected Chairman of the local Branch, and Mr. Pendray of the British American Paint Co., Victoria, Vice-Chairman.

The meeting recommended that Mr. R. H. H. Alexander be appointed Secretary.

A number of important matters were taken up and informally discussed. The opinion of those present was that a decided effort should be made to interest more manufacturers in the work of the Association, and to take up a number of local matters that required attention from the manufacturers' standpoint.

Arrangements were made to prepare for the visit to the Coast of the Tariff Commission, and it was decided that the different tariff matters that the members were interested in should at once be put in shape for presentation.

The meeting then adjourned.

NEW MEMBERS

Barrie, Ont.

BARRIE CARRIAGE COMPANY, LIMITED, THE—Carriages.

Calgary, N. W. T.

BURNS, P. & Co.—Beef, Pork, Mutton, Bacon and Ham.

STANDARD SOAP COMPANY LIMITED—Toilet and Laundry Soaps.

WESTERN MILLING COMPANY, LIMITED—Flour.

WESTERN TENT & MATTRESS CO., THE—Tents and Mattresses.

Edmonton, N. W. T.

EDMONTON BREWING AND MALTING CO., LTD., THE—Beer, Ale, Stout and Malt.

Hespeler, Ont.

HESPELER FURNITURE CO., LTD., THE—Furniture.

Montreal, Que.

CANADA TAG & LABEL PRINTING CO., LTD.—Tags and Labels of all descriptions.

CANADIAN SCALE CO., LTD.—Automatic Weighing Machines and Scales.

CRESCENT ELECTRIC CO., THE—Electric Apparatus.

EXCELSIOR CLOAK CO., THE—Cloaks and Skirts.

PHOENIX BRIDGE AND IRON WORKS, LTD., THE—Steel Structural Work.

Penetang, Ont.

ADAMS LAUNCH AND ENGINE MFG. CO., THE—Gasoline Engines and Launches.

Port Arthur, Ont.

NORTHERN LAND AND LUMBER CO., LTD., THE—Lumber and Lath.

Sault Ste. Marie, Ont.

SOO FALLS BREWING CO.—Lager and Porter.

Strathcona, N. W. T.

EDMONTON MILLING CO., LTD., THE—Flour.

Sturgeon Falls, Ont.

IMPERIAL PAPER MILLS OF CANADA, LTD.—Paper.

Toronto, Ont.

CHAPMAN DOUBLE BALL BEARING CO., LTD.—(C. M. Murray, second member).

STEWART, D. M., MFG. CO. OF CANADA, LTD.—Gas and Acetylene Burners.

Winnipeg, Man.

DYSON CO., THE—Pickles, Vinegar, Spices, etc.

HALL, McNAB & Co.—Flour.

MANITOBA ANCHOR WIRE FENCE CO., LTD., THE—Fencing Material, Gates, etc.

MANITOBA GYPSUM CO., LTD., THE—Hardwood Plaster, Plaster of Paris.

Woodstock, Ont.

CROWN LUMBER CO., LTD., THE—Bent Goods.

United States Pilotage Law Affects Victoria.

Notice is given that ninety days from June 1st, 1905 (notice required of steamship companies before a mail contract can be abrogated), the Pacific coast steamers will no longer call at Victoria en route from San Francisco to Seattle. The steamers of the company have been forced by the new law to take a pilot when entering or leaving San Francisco, which they have not done heretofore. The steamers come under the regulations applying to foreign-going steamers because of their call at Victoria; steamers entering San Francisco from Seattle without calling at Victoria are not required, as coasters, to take pilots. The new law, which went into effect several weeks ago, causes an additional annual expense of \$16,000 to the company. The Canadian Government has been apprised of the company's proposition, but declines to give any subsidy.—*Abraham E. Smith, U.S. Consul, Victoria, British Columbia.*

A WELCOME TO THE PRESIDENT

Mr. W. K. George Banqueted by the Association at the National Club, Toronto.

IT was a most enthusiastic gathering of manufacturers that surrounded the tables in the National Club, Toronto, on the evening of August 17th, to honor Mr. W. K. George upon his return from the British Excursion, which was so ably conducted under his leadership during the present summer.

The beautiful dining room was completely filled and a large number of representative members from leading manufacturing centres throughout Canada were present. The chair was occupied by Mr. C. C. Ballantyne, 1st Vice-President of the Association and seated around him at the head table were Mr. W. K. George, Toronto; Mr. Geo. E. Drummond, Montreal; Mr. J. S. Larke, Canadian Commercial Agent in Eastern Australasia; Mr. Geo. Booth, Toronto; Mr. P. W. Ellis, Toronto; Mr. W. K. McNaught, Toronto; Mr. C. A. Birge, Hamilton; Mr. C. H. Waterous, Brantford; Mr. R. A. Donald, Toronto; Mr. W. P. Gundy, Toronto; Mr. W. B. Tindall, Toronto; Mr. J. D. Flavelle, Lindsay; Mr. Lloyd Harris, Brantford; Mr. Geo. D. Forbes, Hespeler; Mr. L. V. Dusseau, Toronto; Mr. Thos. Roden, Toronto; Mr. A. S. Rogers, Toronto Mr. Fred. Birks, Montreal Mr. Alex. Saunders, Goderich; Mr. C. R. H. Warnock, Galt; Mr. J. Hewton, Kingston, and others.

TOAST TO THE GUEST.

After a very pleasant dinner, the chairman in a few well chosen words referred to the unqualified success of the British Excursion, and called upon Mr. Geo. E. Drummond, ex-President of the Association who had laid the initial plans for the Excursion in Great Britain to propose the toast to the guest of the evening. Mr. Drummond said:—

"MR. CHAIRMAN AND GENTLEMEN,—That member of our Association who first proposed these annual excursions with a view of acquiring a clearer and better knowledge of our country, empire and people, had in him the makings of a statesman. I think these excursions are the best things we ever had. The last time I had the pleasure of speaking before you was on the occasion of our trip to the western coast. That trip did good. It enabled east and west to work together. That excursion was a great excursion, but we have been moving on to better things and we have moved this year to an advent which we are celebrating to-night. Gentlemen, the year 1905 will pass into the annals of this Association as in some respects the greatest in its history and it will pass into the history of the Mother Country itself as marking a distinct advance between business men of the Motherland and Canada. Gentlemen, to our excursion party of 1905, and to the leader of the party, belongs the honor. We are here to-night to acknowledge our obligation to our friend and President and to his party, and we do so not only as members of the Manufacturers' Association, but as Canadians and British subjects. Speaking for myself, I esteem it both an honor and privilege that as Mr. George's immediate predecessor in office and his personal friend and admirer, I am permitted to be your spokesman to-night in making, however inadequately, public acknowledgement of his services. I look back a year or more to the time when as your then President, but venturing to act on my own initiative, I opened in London, negotiations which finally resulted in the London Chamber of Commerce undertaking to "father" our British Excursion for 1905. While I knew from experience that anything undertaken by that splendid body of Imperialists would be a success, yet our proposed visitation, if I may so term it, was in itself so unusual in so far as Canadian commercial bodies were concerned, that one might well be pardoned for nervousness in respect to the effect, politically speaking and otherwise, upon the minds of the British people.

"Well, it seems we struck the psychological moment. Men of the first rank headed the undertaking in London, and I deem it only right that I should here personally acknowledge on this

the first opportunity afforded me, the splendid manner in which Messrs. Blackwell, Brassey, Boulton, Murray, Charleton and others redeemed their promises made to myself a year ago as to the warm reception that would await our members upon their arrival in England. With our guest of this evening at the helm of this organization and efficient aides-de-camp at his side in the persons of Messrs. Younge, Ballantyne, McNaught and others, with the pleasant memories of the successful fore-gathering of the Chambers of Commerce of the Empire in Montreal in 1903 still fresh in the minds of our friends of the British Chambers of Commerce, with all Britain, from His Majesty and His Gracious Consort down to the humblest subject, interested and ready to welcome to the 'cradle of the race' the children of the Empire from over the seas, all Canada proud of the hearty welcome extended by the Motherland and proud of the representatives we sent to her, there could be no question as to the success of the venture. It has succeeded beyond our best anticipations and another golden link has been welded in the chain that happily binds us in, let us hope, permanent alliance to the Motherland.

"When I returned from Europe a year ago, the members of this Association were kind enough to tender me a banquet in Montreal, and on that occasion two of the members of the present Government, the Leader of His Majesty's loyal opposition at Ottawa, Mr. Robt. Meighens, and among others our honored Chairman of to-night, were good enough to express satisfaction with my humble endeavor to, as one of the speakers put it, 'carry the banner of Canada to the British people.' With much greater reason do I now pass on that compliment to the guest of this evening. If I may be permitted to single out for special reference any public utterance of our President during the recent tour, may I indicate that sound patriotic address he delivered before the London Chamber of Commerce on the evening of the 21st June last. That speech will, I am confident, be far reaching in its good results in Great Britain. He set clearly before his auditors the patriotic considerations that decided us upon this British trip for 1905. He performed a distinct service to Canada and to the Motherland in setting forth so clearly the immense possibilities in respect to population, wealth and the strengthening of British interests in this great section of the Empire; described admirably our vast resources, wealth of field, forest, mine and fisheries; our great transportation systems and our mighty and as yet practically undeveloped water powers. He showed conclusively the absolute necessity not only in the interests of Canada but in the Empire itself, that we should develop to the fullest possible extent the great natural resources with which God has blessed us, and that in so doing we should build up native industrial enterprises and provide for our ever increasing population, varied, constant and congenial employment at wages as attractive as our neighbors are offering, and while doing this under the sane protective fiscal policy that alone will meet the requirements of the position in which we Canadians find ourselves in respect to the competition that we are called upon to contend with, yet leaves us free to enter into mutual arrangements with the Mother Country and our Sister Colonies, by which and through which we can each grant to the products of the other an effective preference as against the products of foreign labor, whilst at the same time equitably safeguarding in each case local industrial enterprises and interests. In a word, our President stood, as we all must, on our Halifax platform in respect to the fiscal question.

"The Dominion has already taken the first step in the right direction in granting a preference to the Mother Country. This preference will, we hope, be made really equitable and effective in the scientific revision of the tariff to be undertaken this

year, when we trust the Canadian tariff will be specially framed with two distinct objects, primarily to encourage by a sound protective policy the development of native industrial enterprises that will keep this section of the Empire strong and prosperous, and next to provide for diverting under a mutual preferential arrangement which we trust will be the final outcome of Mr. Chamberlain's propaganda, our increasing orders for surplus requirements to the producers within the Empire rather than permit our trade, as at present, to go largely to our, from a Customs Tariff standpoint, antagonistic competitors. Let Great Britain in return grant to us such preference over foreign products as she may, after full conference, find practicable and consistent with the interests of her own population and industries, whose welfare must naturally be her first consideration. In this way, each acting along the lines of least resistance, we may hope gradually to weld the Empire into a unity as solid and co-operant as the United States of America. Such a policy will keep the various sections of the Empire in the closest possible touch each with the other. It will make for the general prosperity and solidarity; it will do more—it will, for instance, transform the new settlers now pouring into Canada from foreign countries, into good Canadians and British subjects more quickly than by any other policy, because it will divert all their energies into Imperial channels of thought and effort, and will absorb them into the family by the time that they are qualified to act as electors.

"Our President touched one other subject very near to the heart of every self-respecting Canadian—I refer to the question of Imperial defence. He made quite plain to the people of the Old Land the fact that this great organization, like almost every other trade associations in Canada, stands for the early and just discharge of the debt we owe the United Kingdom in respect to the defence of our sea-borne commerce. No one would oppose more strenuously than would my friend, Mr. George, or myself any attempt to hamper in the slightest degree full independence of action on the part of our Canadian Parliament in respect to the mode of discharging the just debt of our people in connection with naval defence of our country and its commerce. The tax-payers of Great Britain themselves would most strenuously oppose anything that would savour of dictation to a free people, but surely there are ways and means whereby our Canadian Parliament, acting absolutely on its own initiative, can liquidate this debt honestly and honorably and change the condition of affairs that at present makes self-respecting Canadians hang their heads when the question of naval defence is under discussion. Our Parliament must soon act in this matter, and in doing so can rely, I firmly believe, on the entire approval of the people of Canada.

"On all of these matters, and they are of very serious moment to Canada and to the Empire, Mr. George placed before the people of the Motherland the views of this Association, and he did it well. We cordially acknowledge our obligation to himself and to his party, and we drink now to his health, happiness and prosperity, and include in this toast Mrs. George, who so worthily and so gracefully furthered her husband's efforts for the good of this Association and the honor of Canada."

THE PRESIDENT'S REPLY.

The toast which was received with the utmost enthusiasm was then replied to by President George, as follows:—

"MR. CHAIRMAN, AND GENTLEMEN,

"I find it very difficult—yes, impossible—to express to you in words how deeply I appreciate the honor which you are paying me this evening.

"The kindnesses which were showered upon us and the honors which were done us in the Old Land were very pleasant—delightfully so I can assure you, and they touched our hearts most deeply—yet I feel sure that it will not be taken amiss if I say that there is nothing quite so sweet as the approbation of one's own home friends, and there is no pleasure quite equal to that of learning that your work has pleased your own people.

"This is an occasion which I can never forget and the plea-

sure which you have given me has repaid me ten thousand fold for any responsibilities or anxieties which I may have borne or work which I may have done, which seems to me to be most unduly magnified.

"Our trip was unique in character. It was I believe the largest and most representative party of colonials which had ever visited Great Britain, and it was certainly the first time that an organized body of colonial manufacturers had ever invaded the 'workshop of the world.'

"The party was one of which I am sure no Canadian could feel otherwise than proud, and it suffered not by comparison on any occasion.

"It was geographically a most representative party, every province but Prince Edward Island being represented and I frequently found it a very serviceable and striking illustration of the great area of Canada to point out to our audience that some of our party when at home in Canada were nearly 3,500 miles away from each other.

"The purpose of our trip has been so often referred to that I feel as if it were almost unnecessary for me to re-state it here. I will, therefore, be very brief on that point. We stated emphatically that our visit was no political mission, but simply to meet and learn to know our own people better—to understand our own Imperial responsibilities more clearly, and to recognize our Imperial possibilities more fully. All of which we believed could be achieved, to a greater or lesser extent, by such a visit as we were making.

"Of our reception in England you have learned more or less from the newspapers and other sources, but nothing they could convey to you or I could tell you could begin to give you an adequate conception of their princely and lavish hospitality—of their generous and whole-hearted welcome.

"From His Gracious Majesty the King, who with that kindly thought for which he is so famed, made the reception at Windsor Castle the opening event of our visit and thus stamped it with his approval, down to the working classes in the industrial centres, our welcome was most warm. I have not time to tell you of all these. I might mention one or two incidents which occur to me at the moment and which are indicative of all our receptions and illustrate the attention which they attracted. When we visited the great London docks with their miles of docking at which ships from almost every port in the world were lying, representing almost every important steamship line in existence, we found every ship decked from stem to stern in her colors and as the boat on which we were passed by, they dipped their ensigns in salute to the Canadians. It was indeed a pretty compliment.

"At Walsall we found a public holiday declared and thousands surrounding the station to welcome us. Every building in the town was decorated with flags and bunting and above the City Hall floated the Canadian ensign, and so it was throughout our whole British tour. In France our reception was no less enthusiastic. In Paris the Government, the City and the French Chamber of Commerce all treated us royally and extended to us many most unusual courtesies. In fact it was stated to me by people who should know that no delegation from any continental nation had ever received the recognition and courtesies in France which were accorded to our party.

"In discussing trade questions in England we did not hesitate to frankly and explicitly declare our stand on the question of Protection. Pointing out to them that if we expected to build up Canada—that part of their Empire—into the great country which it had every reason to expect to become, we had to establish and develop our industries and make use of our magnificent natural resources in order not only to keep our own people at home by furnishing them congenial employment at satisfactory wages, but in order also to attract others who were looking for similar means of livelihood, and to induce capital and enterprise to come into the land. And I pointed out that to do this—to encourage the establishment and ensure the success of these industries—it was absolutely necessary that

we should have a protective tariff, first as against the United States which with its tremendously developed, highly specialized and thoroughly established industries could dominate our market and crush out our younger industries if free access was afforded to them. That in order to secure a show in Canadian trade our tariff barrier was compelling one United States industry after another to come over into Canada and establish branches with the result that employment was being furnished to thousands of our own people at home, and Canada rather than another and commercially antagonistic country was being built up and enriched, and I need hardly tell you that they acquiesced that while it was good for Canada, it was also good for the Empire that this should be so.

"In this view, as I have said, they readily concurred, and I then pointed out to them that it was just as necessary, if those industries were to have a fair chance of success, that we should have a protective tariff against Great Britain—one that would at least equalize any and all disadvantages with which we had to contend. I pointed out the fact that in the item of wages alone our rate was greatly in excess of theirs and that this and any other disadvantage must be equalized by a protective tariff if the Canadian manufacturer was to have an equal chance.

"I am glad to say, that I, personally at least, did not meet one man, (I am referring to our Free Trade friends in this) who after our case had been presented did not acknowledge the fairness and justness of our contention and the necessity of Protection for Canada, always adding, of course, 'that it would never do for them in England.' to which I always replied, 'that that was for themselves to decide.' But it seems to me that having come to a realization that in some countries, under some conditions Protection is necessary and right, they have come pretty close to reaching the point of recognizing that Free Trade is neither a Fetish nor yet like the Ark of the Covenant on which the hand of man may not be laid; and perhaps they may conclude that under some conditions it would be good for Britain. I do not say they will, I would not even undertake to say that they should, but judging from what I saw, coupled with the statement of the Liberal leader, I do affirm that things in Great Britain are not right as they are. When in the industrial centres you see great throngs of men, women and children, wan, unkempt, poorly clad and ambitionless, you see a sight which you cannot find in Canada, and when in conjunction with that you take the statement of the Liberal leader that 13,000,000 of the British people are living on the verge of starvation—don't you agree with me that things there do not seem to be right under present conditions? And wouldn't you be inclined to try something for a change? However, as I have already said, they must decide for themselves.

"In reference to Mr. Chamberlain, his campaign is a very live issue and has behind it a vast amount of enthusiasm, and the leader himself appears to be in excellent health, in no wise the physical wreck which some despatches last year described him. I do not think the charge can any longer be made that Mr. Chamberlain does not understand and agree with our position. I stated emphatically that it was our intention to make in Canada everything which we could advantageously produce, and that it was our ambition to make them just as good as they were made in any other place on Earth; but above and beyond that, we would do a large and increasing trade with the outside world and that we would like to see that diverted into Imperial channels by Preferential Tariffs. Mr. Chamberlain understands and acquiesces in that idea.

"Just what will be the result of the trip it is hard to estimate. It has certainly helped in placing Canada in a prominent light before British people. Our own people, I mean Canadians resident in England, were greatly pleased with the results achieved. They all agreed in the one statement that Canada had never had so much good advertising before the British public as it had received from our visit. That best of Canadians—Lord Strathcona—expressed to me his complete satisfaction with the results achieved, and said we had educated many in England along a line which they never understood before and in a way

which nothing else could have done. To-day Canada stands pre-eminent among the colonies in the British mind. It is no longer a question of 'has she a future,' but an endeavor to estimate how great that future will be. I think that our visit will decidedly assist the emigration work of the Government. It will certainly result in more British capital coming into Canada. They did not like being told that almost every week saw United States industries being established in Canada and securing the field, while Englishmen were entirely neglecting it. I have since returning heard of seven gentlemen, (how many more there may have been I know not) who have come out since our visit for the purpose of considering the advisability of establishing branch factories here.

"To the London Chamber of Commerce which undertook the herculean task of arranging all the details of our visit, and made our trip not only a possibility but a great success, our sincerest thanks are due. The preliminary work which of course entailed the greatest amount of labor was all done before our arrival, but during our stay in London the work necessary to handle our party necessitated their maintaining a staff of six clerks in a suite of offices at the Hotel Cecil. It was all to them a labor of love, done so generously and kindly because we were brother Britons.

"To Canada's Grand Old Man, Lord Strathcona, we once again owe more than we can ever repay. To his untiring and apparently tireless energies much of the success and pleasure of our trip are due. Nothing is apparently too much trouble for him to do if it will benefit Canada or give pleasure to a Canadian. And done withal, in that kindly and unostentatious manner which stamps him so effectually 'one of nature's noblemen.' I could wish Canada no greater good than that his Lordship might be spared for many years to fill the post of High Commissioner in London.

"I also want to refer to His Excellency, the Governor-General's interest in our trip. Almost the last message which we received when leaving was his 'Bon Voyage,' specially conveyed to us, and the first personal welcome which we received when returning was his, offered to us at Quebec through Lieut.-Colonel Hanbury Williams.

"I feel that we have all come back impressed with the glories of our world wide Empire, more fully imbued with the possibilities of its future and determined to do our part in its maintenance and development."

In concluding, Mr. George stated that in accepting the honor done him by the Association he did so as the official head of the British Excursion party, and on behalf of everyone who took part in the work of the trip. The work had been done well and it had been done enthusiastically. He made special reference to the services of Mr. Ballantyne, Mr. McNaught and the Secretary, and referred to the hearty spirit of co-operation and the desire to see Canada successfully and honorably represented in the Old Land, that permeated the whole party. Once more he thanked the Association for the great honor conferred upon him.

Following the ovation which greeted Mr. George's eloquent words, Mr. J. S. Larke was called upon and delivered a very interesting ten minute speech on the progress of Canadian business in Australia. Mr. Larke was received with many expressions of welcome, and his remarks were closely followed.

Before the close of the meeting, Mr. P. W. Ellis moved a very hearty vote of thanks to Mr. Ballantyne, the chairman of the evening, and referred in eulogistic terms to the excellent services rendered to the Association by him at the time of the re-organization of the Association and the amalgamation of the local Associations in Montreal and Toronto.

Mr. J. D. Flavell seconded the motion, and complimented Mr. Ballantyne upon the able manner in which he had performed the duties of his office on the British Excursion, duties, which were so well performed that the whole of Canada would surely benefit through his efforts.

The banquet closed with the singing of God save the King.

Insurance Department

THE FIRE INSURANCE POLICY.

MY experience, as Manager of the Insurance Department, has demonstrated, to my own satisfaction at least, that too little importance is attached by most insured to the Insurance Policy, and I do not think it will be out of place if I use this column in directing the attention of the members of the Association to some of the features that have been revealed in the course of my work. I do not propose that this shall be a treatise on the technical construction of the policy, or an elaborate discussion of the phraseology used in the preparation of what is commonly termed the "written" portion of the policy; in no sense will it be theoretical, it will be an expression of some of the difficulties I have encountered in the ordinary conduct of the business of the department.

Apparently it is generally recognized that Fire Insurance is an important and necessary protection, this is evidenced by the universality with which it is adopted; on the erection of a building, the increase of valuable plant or the accumulation of stock, the most natural thing to do is to cover the additional value by corresponding insurance. I do not speak here of the obligations imposed by the now generally accepted Co-Insurance Clause, but of the inherent, spontaneous demand for adequate protection in case of fire; instructions are therefore given to the broker or agent to obtain such additional insurance as may be necessary, the premiums are paid, the policies subsequently received, pigeon holed, and satisfaction reigns supreme. To how few men does it occur that the documents in the shape of insurance policies thus received are legal documents promising to pay sometimes large amounts of money, and that such documents should be examined and considered with all the care one would ordinarily give to a deed acquiring property, or to a lease securing business premises.

Whilst I am free to admit that the insurance agent or broker should protect the insured's interest in this matter, as does his legal advisor in the matter of his deed, it is manifest that there is no correspondence between the two relations; the influences at work in the selection of broker or agent are on a different plane from those exercised in the selection of a legal advisor;—this is a stated truth, so self-evident as to need no justification. Let me, as enforcing the truth, say that in three out of five fire losses in which this department participated, the insured were heavy losers by reason of imperfectly drawn or imperfectly understood agreements!

If therefore, the insured, for reasons of his own, desires to "patronize" an inexperienced and consequently incompetent broker or agent, let there be the more care exercised in the examination of the policies that are presented as the contract implementing such orders.

Further, if for any reason it is desired to divide the "patronage," the greater the necessity for charging some one with the responsibility of examining and reporting upon all policies. I state an indisputable fact when I say that divided authority in the matter of Fire Insurance almost invariably results in non-currency, confusion, and, in the event of fire, consequent annoyance, trouble, and pecuniary disadvantage.

These two conclusions are forced upon me as a result of the practical experience derived in the adjustment of losses and of the examination of the policies that have been submitted for consideration and report.

An ounce of prevention is worth a pound of cure, and the time to see that the policies are properly drawn is before, not after a fire.

In considering this subject there is one feature that stands out in the foreground so prominently that it has only to be mentioned to be appreciated. Under the laws of some of the Provinces, Ontario, Manitoba and Nova Scotia amongst the number, the printed conditions of the policies are regulated by statute, but it is within the provision of the law that the companies may vary or amend such conditions if they are conspicuously printed in ink of a different color, it being reserved to a court or jury to determine whether such variations or additions are reasonable for the company to exact. If anyone interested will take the trouble to examine a set of policies issued in any of these provinces, it will be found that the privilege of varying or adding to the conditions is utilized by the majority of the insurance companies to the extent of from two to twenty distinct and separate additional obligations, practically changing the whole face of the contract.

In the Province of Quebec and elsewhere, there is no statute on the subject; the insurance companies have their own individual policy conditions expressing their own idiosyncracies, and some of these are so fearfully and wonderfully drawn that it would almost seem as if the purpose was to provide a means of escape from the payment of any fire loss to which the management takes a real or sentimental objection.

Therefore, every insured should study his contracts in the light of the variations in the provinces where statutory conditions are in force, or the conditions themselves where no such legislation exists. I am quite aware that this suggestion will be met by the statement that life is too short to go to this extent, but my experience shows me it is an absolute necessity and if the insured will not do so themselves, or get it done for them, let there be no complaining when the testing time comes.

E. P. HEATON, Manager.

WOOD-MEASURING MACHINE.

Patents have been taken out in Germany for a machine which, it is said, will accurately register the cubic contents and linear measure of lumber or logs at the saw.

The machine is attached to the side and upper part of the gang-saw frame, is operated by a chain-belt from the feed roller gear, and so geared that the length of the log is registered as it is drawn into the saws. By the attachment of a small roller placed between the feed roller and the saws and fastened to the feed roller, the irregularities of the log's surface, by the rising and lowering of the feed roller, are communicated to the indicator, which in turn controls the numerator registering the cubic contents.

After the log has passed through, the feed roller, carrying with it the roller, lowers, thereby disengaging a small ratchet, throwing the indicating machine out of action.

The indicator is first set at a point indicating the average diameter of the logs to be sawed, and the supplementary roller, which is attached to and working in harmony with the feed roller, causes the pointer to indicate the exact diameter of the log, which in turn regulates the speed of the gear wheel operating the cubic numerals.

A glove factory is to be added to Waterloo's industries. John Schondelwayer and Norman Eugelter have organized a company, known as the Waterloo Glove Mfg. Co. They will manufacture gloves, mitts and gauntlets.

FURTHER LIGHT ON THE METRIC SYSTEM

Mr. Samuel S. Dale replies to Mr. Ch.-Ed. Guillaume.

Editor INDUSTRIAL CANADA:

In your July issue Mr. Ch.-Ed. Guillaume takes exception to one paragraph of my "Protest against the Metric System," and I would like to call attention to the misunderstanding under which he is evidently laboring. He asks: "What remains now of that universal and permanent unit of measurement of which Mr. Dale speaks?"

That standard is yet to be found. Scientific men have searched in vain for it. The French savants believe that the earth was such a standard and made a quarter of the earth's meridian the base of the metric system, but scientific research soon demonstrated that their pretended measurements were inaccurate, and it has since been found that no two meridians are of the same length; that the poles of the earth are vibrating; and that the size of the earth itself is changing. Nowhere has man found a natural standard that is not subject to nature's law of constant change. A few scientists state that waves of light are an "immutable standard." Whether that is so or not has no bearing on one point that I desired to make, that is, that if such a standard is ever found it will serve equally well for any arbitrary length whether yard, meter, vara, or what not.

All that can be done is to select the best material for our standards and then guard them carefully to prevent their being damaged. In the paragraph of my article which M. Guillaume misunderstands, I compared the care of the metric standards with those of the English, to show that the English standards at London have been guarded as well as have the metric standards at Paris. My protest was directed against the systematic attempt by the metricites to discredit the English yard by spreading reports that its basic standard could not be relied on. This attempt is well illustrated by the absurd Mendenhall order to which I referred. It is further illustrated by the careless handling of the English standards at Washington by metricite officials who went so far as actually to ship them by express to the Buffalo and St. Louis expositions on the pretext that they were worthless. It would, doubtless, be a source of profound satisfaction to the advocates of the metric system if they could create a material discrepancy between the standards of the English yard as used in different parts of the world, say, for example, between the British Empire and the United States. As a matter of fact the English yard is the same the world over, as far as any standard of length can be considered constant. Every natural standard so far known, is changeable, but such changes are so slight as to be negligible even for extremely fine scientific measurements. In fact the unavoidable errors in making comparisons of standards, renders it doubtful whether many of the supposed variations have really occurred. For the arts, manufactures, commerce and daily life these changes or not worth talking about, and yet the metricites have used such negligible changes to create the belief that a material variation exists between the yard used in Great Britain and that used in the United States. How well this policy of misrepresentation has succeeded is shown by my quotations from Lord Belhaven and E. Johnson, Secretary of the Decimal Association.

The point I desire to make clear is that even admitting such negligible variations to be of importance, far more serious variations have been found in the metric Standards than in the English. We have only to refer to that excellent work, written by M. Guillaume himself, and entitled "Le Système Métrique," for an account of the many errors discovered in the metric standards. A few extracts to illustrate:

"Ces deux résolutions II et III furent votées à la suite d'un intéressant Rapport de Govi, qui décrit l'état du mètre des Archives, et qui se préoccupe, ainsi qu'on l'avait fait précédemment, des dépressions attribuées aux touches des comparateurs."

"La Section française est d'avis que les mètres actuellement en construction doivent être continués jusqu'à complète terminaison, et qu'en même temps elle doit s'occuper d'exécuter trois mètres avec les métaux purifiés par les méthodes les plus récentes."

"Le Bureau est chargé de faire connaître au Gouvernement français qu'il (le Comité) ne pourrait recevoir des règles et des cylindres destinés à devenir des mètres et des kilogrammes prototypes qui auraient été confectionnés avec l'alliage remis au Comité."

The alloy thus condemned in 1877 was later accepted and standards made from it have been distributed to various parts of the earth. A few more extracts from M. Guillaume's book:

"Plusieurs délégués soutenaient, en effet, que le poids de ce cylindre des Archives s'écarte notablement de sa définition théorique, c'est-à-dire du poids du décimètre cube d'eau: bien à tort d'ailleurs, on faisait monter cette erreur jusqu'à 200mgr. et même 300mgr."

"Aussi le Comité international a-t-il décidé de proposer à la sanction de la prochaine Conférence générale (1901) cette double proposition:

"1. Il faut établir une distinction entre le Décimètre cube, unité de volume, et le Litre, unité de capacité.

"2. Le Litre sera défini comme étant le volume occupé par un kilogramme d'eau pure, à son maximum de densité, et sous la pression atmosphérique normale.

"Il résulte de cette définition, et des résultats rappelés ci-dessus, que le litre est un peu plus grand que le décimètre cube."

Pages of INDUSTRIAL CANADA could be filled with illustrations from M. Guillaume's book showing the inaccuracy of the metric standards of length, volume and weight. They are, to be sure, negligible in practically all the processes of human industry, but what I desire to make clear is the unfairness of the metricite attack on the English system for less important variations in the various standards that from time to time have been used. That attack, as I have already said, is well illustrated by the Mendenhall order and the treatment of the English standards at Washington.

I am confident that M. Guillaume will recognize the necessity of keeping the Bureau Internationale des Poids et Mesures free from any suspicion of encouraging such unfair methods. That institution is supported by contributions from nearly all the nations of the earth, and under the law is charged with the duty of verifying any standard a contracting nation may require to have verified, whether it be metric, English or any other. It will be seen without further explanation that the contributions from English speaking countries would be placed in jeopardy if the Bureau Internationale des Poids et Mesures should lend itself to the encouragement of this attack on the English system.

M. Guillaume falls into a surprising error in his reference to Russia. Surprising in that he magnifies the trifling fact that some Russian decree may have defined the archin by comparison with the meter while he loses sight completely of the fact that since Peter the Great introduced the English inch into Russia no change has been made either in the inch, the archin or any of the Russian linear standards. To-day the English inch is the basis of all linear measurements in Russia. An archin is 28 inches; a sagan in 84 inches or 7 English feet; a verchok is $1\frac{3}{4}$ inches; a verst is 3,500 English feet. Compare this uniformity so firmly established in the Russian industrial system that no Government can ever change it, with the chaos that has resulted from the metric system, conceived by theorists and established by force. In Russia it was evolution; in France, revolution.

M. Guillaume states that his reply to my protest has been written under a sense of duty, as an officer of the International Bureau des Poids et Mesures, "to set things in their true light in order to prevent the public from accepting as sound an opinion at variance with the facts." In almost the next breath he

says: "It was never the intention of the originators of the metric system to accept the earth as their standard of measurement."

In M. Guillaume's "Le Système Métrique," I find the intention of the originators of the metric system thus stated in an address by one of them (probably Laplace) at the presentation of the original metric standards to the Corps Législatif, on June 22, 1799:

"L'Académie des Sciences jugea que l'unité de cette mesure devoit être une partie connue et aliquote de la circonférence du Globe terrestre. Elle a fixa au dix-millionième de l'arc du méridien compris entre l'équateur et le pôle boréal. . ."

"Jamais l'ignorance et la férocité des peuples barbares ne les enlèveront a la vaillance, au patriotisme, aux vertus d'une Nation éclairée sur ses intérêts, sur son honneur, sur ses droits. Mais si un tremblement de Terre engloutissoit, s'il étoit possible qu'un affreux coup de foudre mit en fusion le métal conservateur de cette mesure, il n'en résulteroit pas, Citoyens Législateurs, que le fruit de tant de travaux, que le type général des mesures put être perdu pour la gloire nationale, ni pour l'utilité publique."

In the same book I find the results of this profession that the earth was the metric base thus stated by the Academy of Sciences of St. Petersburg; April 8, 1869:

"Aussi est-il démontré que l'étalon du mètre gardé aux Archives de France n'est pas la dix-millionième partie du quart du méridien . . . Cependent il est impossible de méconnaître que la fiction qui lui a servi de base a puissamment contribué a étendre son usage, en facilitant son adoption par a'autres nations. En effet, le mètre doit une grande partie de son prestige à l'idée flatteuse pour l'orgueil humain, de pouvoir rapporter les mesures dont l'homme fait journellement usage aux dimensions du globe qu'il habite."

The discussion of the origin of the metric system is filled with statements like the first, which I have accepted as honest expressions of intention. Does M. Guillaume mean to say that the originators of the metric system were not honest in their professions? That they proclaimed the earth as the base of the metric system when they knew, as the whole world learned a few years later, that it could not be used as a base for any system of weights and measures? Does M. Guillaume believe that the originators of the metric system pretended to use the earth as a base merely to inveigle other nations into accepting that system by appealing to their vanity?

Boston, Mass., August 5, 1905.

SAMUEL S. DALE.

AUSTRALIA AND THE METRIC SYSTEM.

The following resolution in respect of the Metric System of Weights and Measures was passed in June last by the General Council of the Chambers of Commerce of the Commonwealth of Australia:—

"That this General Council of the Chambers of Commerce of the Commonwealth of Australia views with satisfaction the increasing public interest in the Metric System of Weights and Measures, and expresses the hope that it may very shortly be adopted for England and the Empire generally, and recommends that such legislation may now be framed in the Commonwealth as will enable us to at once follow the Home Country in this change."

SITUATION WANTED.

An energetic, ambitious man of 25 years of age desires a responsible position in sales or purchasing department of strong Canadian manufacturing company—machinery or metal trades preferred. Five years' experience in responsible positions with large manufacturers of Canada and United States. First-class references. Committee with Canadian Manufacturers' Association.

IMMIGRATION TO CANADA, 1904-05, BY ORIGINS.

African, South.	35
Australian.	204
Austrian, N. E. S.	837
Bohemian.	107
Buckowinian.	1,123
Croatian.	27
Dalmatian.	4
Galician.	6,926
Hungarian, N. E. S.	981
Magyar.	5
Ruthenian.	3
Slovak.	47
Styrian.	29
Belgian.	796
Bulgarian.	2
Brazilian.	1
Dutch.	281
French.	1,743
German, N. E. S.	2,704
Alsace.	5
Bavarian.	6
Prussian.	28
Saxon.	10
Wurtemberg.	6
English.	48,847
Welsh.	770
Scotch.	11,744
Irish.	3,998
West Indian.	43
Bermudan.	8
Jamaican.	26
Greek.	98
Hebrew, N. E. S.	1,000
Russian Hebrew.	6,206
Polish Hebrew.	151
Austrian Hebrew.	240
German Hebrew.	118
Italian.	3,473
Japanese.	354
Newfoundland.	190
New Zealand.	57
Portuguese.	1
Poles, N. E. S.	247
Poles, Austrian.	70
Poles, German.	29
Poles, Russian.	399
Persian.	8
Roumanian, N. E. S.	270
Russian, N. E. S.	1,887
Finns.	1,323
Doukhobors.	24
Spanish.	10
Swiss.	150
Servian.	7
Danish.	461
Icelandic.	413
Swedish.	1,847
Norwegian.	1,397
Turkish.	30
Armenian.	78
Egyptian.	2
Syrian.	630
Arabian.	48
Negro, Mulatto, etc.	5
India.	45
	102,614
From United States.	43,652
	146,266
Fiscal Year, 1903-04.	130,331
Gain.	15,935

Transportation Department

DECISION OF RAILWAY COMMISSION IN INTER-SWITCHING CASE.

THE judgment of the Board of Railway Commissioners in the London Interswitching case, which is published below, will have an important effect upon interswitching arrangements between railways throughout the Dominion. It will be observed that the Grand Trunk is ordered to afford reasonable and proper facilities for the interchange of traffic with the Canadian Pacific Railway and between the Canadian Pacific Railway and other railway lines.

By the terms of the order which the judgment directs shall be issued, the switching service is to be performed at the London tariff rates, such rates to be divided so as to allow the Grand Trunk Railway switching rates as specified. In other words, the cost of switching is to be absorbed by the railway companies, not only on competitive but on non-competitive traffic as well. This is an important departure from railway practice. At most points where interswitching arrangements have been affected by railways, the cost of switching service has been paid by the railway only on traffic from competitive stations. Where the traffic originated at non-competitive stations, a charge was made for switching in addition to the regular tariff rate.

The Board's decision in the Lindsay interswitching case will doubtless be in the same terms, except as to the rate of compensation.

It is in order now for railways to adjust their other interswitching arrangements to conform to the Board's decision.

Following is the text of the decision:—

"The Canadian Pacific Railway has applied to the Board for an Order directing the Grand Trunk Railway Company to afford proper facilities for the interchange of traffic between the said companies over the branch authorized by order of the 6th of July, 1904, to be constructed by the Grand Trunk Railway from a point on its line between London and St. Mary's to the line of the Canadian Pacific Railway Company between London and Toronto, and fixing the amounts to be charged for such interchange of traffic and the interswitching of cars over the said branch.

The lines of the two railways in the City of London before the construction of this branch were at a considerable distance apart. Their only present connection at or near London is by this branch, which is four thousand eight hundred feet long.

The railway lines now operated by the Grand Trunk Railway Company in and through the City of London were in existence long before the Canadian Pacific Railway was constructed.

The Grand Trunk Railway Company has extensive terminal properties at that point, including a large number of sidings to various business and manufacturing premises, and a considerable number of team tracks upon which cars are loaded or unloaded. The company has an extensive business at that point.

The terminal facilities and business of the Canadian Pacific Railway Company at London are small as compared with those of the Grand Trunk Railway Company.

By means of the branch mentioned, the railway cars can be taken to and from a large number of business premises in London to which the Canadian Pacific Railway Company has heretofore not had direct access.

The advantages which the Canadian Pacific Railway Company can offer to the Grand Trunk Railway Company in this respect at and near London are very small as compared with those which this connection will afford to the Canadian Pacific Railway Company. On this account, it is urged that, in the

division of rates for traffic interchanged by this branch between the two companies, a very large proportion should be assigned to the Grand Trunk Railway Company—much greater than that which would be a fair remuneration for the mere service to be rendered by the Grand Trunk Railway Company in the transportation of cars over this branch and its London terminal lines and the loading and unloading of the same.

By section 253 of the Railway Act, 1903, 'all companies shall, according to their respective powers, afford to all persons and companies all reasonable and proper facilities for the receiving, forwarding and delivering of traffic upon and from their several railways, for the interchange of traffic between their respective railways and for the return of rolling stock. . . . ; and every company which has or works a railway forming part of a continuous line of railway with or which intersects any other railway, or which has any terminus, station or wharf near to any terminus station or wharf of any other railway, shall afford all due and reasonable facilities for delivering to such other railway, or for receiving from and forwarding by its railway all the traffic arriving by such other railway without any unreasonable delay, and without any such preference or advantage, or prejudice or disadvantage, as aforesaid, and so that no obstruction is offered to the public desirous of using such railways as a continuous line of communication, and so that all reasonable accommodation, by means of the railways of the several companies, is, at all times afforded to the public in that behalf; and any agreement made between any two or more companies contrary to this section shall be unlawful and null and void.'

By section 271, 'The facilities to be afforded as required by section 253, shall include the due and reasonable receiving, forwarding and delivering by the company, at the request of any other company, of through traffic, and in the case of goods shipped by carload of the car with the goods shipped therein, to and from the railroad of such other company, at a through rate, and also the due and reasonable receiving, forwarding and delivering by the company, at the request of any person interested in through traffic, of such traffic at through rates.'

Section 266 provides for the making of joint tariffs by agreement between companies whose railways provide a continuous route.

Section 267 enables the Board to require railway companies to agree upon and file a joint tariff satisfactory to the Board, or that the Board 'may, by order, determine the route, fix the toll or tolls, and apportion the same among the companies interested and may determine the date when the toll or tolls so fixed shall come into effect, and traffic shall be carried by the companies in accordance therewith;' and by sub-section 3, 'in any case where there is a dispute between companies interested as to the apportionment of a through rate in any Joint Tariff, the Board may apportion such rate between such companies.'

(b). With the progress of invention, new enterprises are continually supplanting or injuring old ones to the ruin or loss of those interested in the former. Railways have not only directly affected in this way former modes of transportation, but they have also been instrumental in building up particular localities or enterprises at the expense of others. It has never been the policy of the law to afford compensation for losses thus occasioned. When the legislature authorizes the construction of new lines of railway in competition with those formerly existing, this is not done with a view to benefit the promoters of the new lines or to injure those interested in the old ones, but solely for the public good.

The provisions of the Railway Act which require railway companies thus to interchange traffic at connecting points are

introduced, not for the purpose of benefiting one railway company at the expense of another, but solely in the interest of the public. The law cannot recognize anything in the nature of a good-will of the business of either railway company thus affected for which another should give compensation. In my opinion the division between railway companies of the joint rates for tariff thus interchanged should be made upon the principle of giving reasonable compensation for the services and facilities furnished by the respective companies in respect of the particular traffic thus interchanged, and not by reference to the magnitude of the business of one company or the other at particular points or the respective advantages which each can offer to the other there, or a comparison of the loss which the one is likely to sustain with the gain likely to accrue to the other from the giving of the facilities which the law requires.

It has also been urged on behalf of the Grand Trunk Railway Company that the Board should deal with this question of the division of such rates or the allowance of charges for interswitching in a general way and by reference to all the points in Canada where the railways of these two companies connect.

It does not appear to me that this can properly be done. I think that in each case the nature and value of the service to be rendered and the facilities to be used must be taken into consideration. With this in view, the Board sent its Chief Traffic Officer to look over the situation in London and give to the Board an estimate of the amounts which should be apportioned to the Grand Trunk Railway Company for the services to be rendered by it in the interchange of traffic over this line and the facilities which will thus be placed at the disposal of shippers and consignees of freight in London.

After having examined the locality and considered the information acquired in this way, as well as that supplied by the answers of the respective companies to questions framed by the representatives of the Grand Trunk Railway Company, the Traffic Officer has made a report, upon which, in my opinion, the Board should act.

It is clear, I think, that the Grand Trunk Railway Company is obliged to furnish, for the carriage over its portion of the continuous line, for the receipt and delivery of the same and for the loading and unloading of cars for the purpose, the same facilities as in respect of traffic passing over its own lines only or transferred to or by it at distant points of the Canadian Pacific Railway System, and the apportionment of the rates should be deemed to be made upon this basis.

There should be an order requiring the Grand Trunk Railway Company to afford all reasonable and proper facilities for receiving, forwarding and delivering all traffic offered to it in cars wholly or partially loaded for passage over the branch in question and its lines connected therewith, and of unloaded cars so offered and of freight offered to it for carriage to and over the lines of the Canadian Pacific Railway by the medium of the said branch, and for the interchange by means of the said branch, of traffic between its lines and those of the Canadian Pacific Railway Company, as well as between the lines of the Canadian Pacific Railway Company and those of other railway companies connecting with the lines of the Grand Trunk Railway Company.

The order should provide that the rates to be charged for such traffic shall be those provided for by any joint tariffs in existence between the railway companies interested, and, in the event of there being none, the rates charged by the Grand Trunk Railway Company between the same points, and, in the absence of either, the rates charged by the Canadian Pacific Railway Company between the same points; also, that in the division of rates for such traffic, the Grand Trunk Railway Company shall be entitled to charge and receive the following tolls for switching freight and live stock traffic, in carloads, from and to the Canadian Pacific Railway at or near London by means of the said branch, namely:

(a) Between the point of connection of the Grand Trunk Railway interchange track and the Canadian Pacific Railway

siding, and all delivery tracks and siding owned or controlled by, or connected with, the lines of the Grand Trunk Railway between and including the Canadian Packing Company's plant on the east and the London Street Railway interchange, known as Springbank siding, on the west, except as provided in clause "b": one cent per one hundred pounds, but not less than five dollars per carload, for each complete haul in either direction; no extra charge to be made for the movement of the empty car in the opposite direction.

(b) For the intermediate switching of through or joint freight and livestock traffic between the point of connection designated in clause "a" and the point of connection of the Grand Trunk Railway with the Pere Marquette Railroad, three dollars per car, in either direction, regardless of the weight; no extra charge to be made for the transfer of the returning empty car.

The order should also provide that all devices, such as free or assisted cartage or cartage allowances intended to equalize the facilities of the respective railways of the Canadian Pacific Railway Company for the collection and delivery of freight at or near London, except the customary system of cartage published in the freight tariffs of the respective companies to be prohibited and that all reference, prejudice and discrimination in such cartage system be prohibited.

The order should provide for its coming into force forthwith."

EXPORT RATE CASE.

The export rate case, known as the Dominion Millers' Association complaint, which was stated to the Board of Railway Commissioners at Toronto in June, 1904, by the representatives of the Dominion Millers' and Canadian Manufacturers' Association, and reported in our 1904 August issue, was decided by order of the Board dated July 25th.

The export rates from Ontario points to Atlantic seaboard are based upon the rates in effect from Chicago to New York. The territory intermediate between Chicago and New York is arranged into groups which are charged a certain percentage of the Chicago-New York rate on export traffic. Under the order of the Board, the railways are required to completely revise and modify their present basis for rates upon all export traffic from Ontario points to the Atlantic seaboard by substituting for the station groupings and percentages previously adopted a revised basis which will give to the Ontario shipper, to some extent, the benefit of his geographical position.

An important feature of the order is the requirement that so long as the railways apply on United States traffic for export via Montreal a lower basis of rates than obtains to New York, a similar differential or lower basis must be applied to Montreal upon export traffic originating in the Canadian territory involved.

It is understood that the railways have asked the Board to suspend the order to give the railways an opportunity to represent to the Board the position in which they will be placed by the adoption of the rate basis ordered. Whether this will result in a modification of the terms of the order remains to be seen. It may be safely assumed, however, that the general principles involved will be adhered to.

The text of the order follows:—

IN THE MATTER OF

The complaint of the Dominion Millers' Association, under the Railway Act, 1903, to the Board in re rates on flour and other grain products charged by the Grand Trunk Railway Company of Canada and the Canadian Pacific Railway Company;

The Dominion Millers' Association, the Canadian Manufacturers' Association, the Canadian Pacific Railway Company and the Grand Trunk Railway Company of Canada having appeared by their respective representatives; upon the report of the Chief Traffic Officer of the Board and the evidence adduced—

IT IS ORDERED

1. That so long as the companies owning or operating railway lines in Ontario find it convenient and expedient to continue the prevailing system of computing their rates to the Canadian and

United States Atlantic seaboard, on freight traffic for export, on the basis of percentages of the co-existent rates from Chicago to New York, or until otherwise ordered by the Board, the said companies shall, for the station groupings and percentages previously adopted, and now in use, substitute the following station groupings, and the following maximum percentages of the Chicago to New York rates, namely:—

Group No.

1. Toronto to King, Klienburg, Waterloo, Galt, Paris, Brantford and Jarvis, and the Niagara Peninsula; East of Toronto to Lindsay, Lakefield, Madoc, Kingston and Sharbot Lake..... 70%
2. North and west of Group 1 to Bobcaygeon, Kinmount, Cobocok, Sutton, Orillia, Alliston, Shelburne, Grand Valley, Fergus, Elmira, St. Mary's, London, St. Thomas and Port Stanley..... 73%
3. North and west of Group — to Haliburton, Midland, Penetanguishene, Collingwood, Proton, Listowel, Mount Forest, Harriston, Goderich, and the St. Clair and Detroit Rivers..... 78%
4. North and west of Group 3 to Gravenhurst, Meaford, Markdale, Durham, Elmwood, Dunkeld, Teeswater and Wingham. 82%
5. North of Group 4 to Emsdale, Owen Sound, Wia-ton, Southampton to Kincardine..... 85%
6. North of Emsdale to and including North Bay.... 90%

2. That when, as now, the rates to Montreal on export freight traffic from Chicago, Detroit, Port Huron and intervening points are lower than the rates in effect on the same traffic at the same time, from the same points, to New York, then at least the same difference shall exist between the export rates from Ontario points to Montreal and the rates in effect on the same traffic, at the same time, from the same points, to New York, the rates to Montreal to be the lower; and the ordinary summer class and commodity rates to Montreal (city) shall not be exceeded on export traffics, on which the said rates shall be subject to section 253, sub-section 3, of the Railway Act, 1903, as modified by section 262, sub-section 4.

3. That, to Montreal, the rates from Toronto may as maxima, be applied from points east as far as, and including the Whitby-Manilla-Lindsay line; east of which line to and including the Cobourg-Hastings-Norwood line, the rates shall be five per cent. less than from Toronto; and east of the said Cobourg-Hastings-Norwood line to and including Belleville, Ivanhoe and Madoc ten per cent. less than from Toronto. From stations east of Belleville, Ivanhoe and Madoc, the rates to be graded down as in the tariffs at present in force.

4. Transfer and harbor charges at the port of exportation shall be treated as has been, or may be, customary, and without discrimination as between ports, or between shippers or localities.

5. That the announcement and publication of rate changes shall not be timed to the disadvantage of Canadian shippers.

6. That the provisions of this order are to cover all export traffic including grain and grain products.

(Sgd.) A. C. KILLAM,

Chief Commissioner,

Board of Railway Commissioners for Canada.

THE TRAINING OF APPRENTICES.

A fair and practical procedure has lately been adopted by the Southam Printing & Lithographing Co. of London, Ontario, in regard to the engaging and training of apprentices. "Owing to the increasing demand for skilled labor and also to the apparent ruthlessness with which unbound apprentices throw up their jobs for trivial bickerings," to quote a pamphlet recently issued by the Southam company "we have decided to bind all new apprentices for a term of years, which will warrant their learning a trade. This we are persuaded will be very much to the benefit of the apprentice as well as to the trade and ourselves." Begin-

ners are not, however, immediately bound upon entering service because, to quote further, "most beginners know nothing about our trade and in a short while they might discover that this is not the trade they are most adapted to follow; whereas, if bound for apprenticeship when first applying they would be compelled to serve out their five years of apprenticeship, and in case their talents did not lean to this trade their future would be ruined. We, therefore, invite applicants to come and look into the different branches of the printing and lithographing trade and should they decide to apply, they will have the privilege of working under the direction of one of our foremen for a period of six months before apprenticeship contract must be signed. This will give the applicant sufficient time to decide the question of continuing or discontinuing the following of either trade under our direction."

In connection with the foregoing, the following extract from the National Lithographer with reference to apprentices may be read with interest:

"At the present, when the overpowering desire of almost every individual is to advance rapidly, when patience and willingness to reach success gradually and step by step are more and more to be classed among the lost virtues, it is only natural that employers complain of not being able to retain apprentices until they have become of use.

"The same complaint is heard in almost every trade, but naturally louder in those industries in which machines still play such a secondhand part as in the lithographing arts, where the workingman has not yet been reduced to the state of a mere automaton, running a machine with a minimum of intelligence and a little effort beyond ordinary care and attention. In lithography so much still depends upon the knowledge and intelligence of the operator that the education of apprentices naturally takes much time and trouble, and before a boy has been sufficiently trained to be of any use and no longer a burden, an amount of care has been bestowed upon him that would represent a nice little sum if reduced to dollars and cents.

"And when, after patient labor, the apprentice is sufficiently advanced to repay some of the efforts expended upon his education, he is almost immediately imbued with an immense idea of his own value, the thought that he owes a debt of honor and gratitude to the man who helped him to get a foothold in one of the finest professions in the world never entering his head for a minute. He considers himself able to earn money, wages that appear big to him, and he makes up his mind to look for a place where he can get them. The result is, as a rule, deplorable in both directions. The boy starts out with superficial knowledge and imperfect training, and finds out after a short while, when it is too late, that he will never be a first-class man, but will have to be satisfied for the rest of his life in the second or third rank. The employer, on his part, has to get another apprentice, again teaches him, with the same result after a little while.

"We regret very much to be obliged to state in this connection that the example given by the older members of the craft is not always what it should be. Only a short while ago a case came under our notice in which several artists who were under a contract to a lithographic house in an eastern city offered their services to a western firm, and announced their willingness to break their present contract. The head of the western house promptly rejected the application, and very properly. If only every house would take this action for its standard, the trade would be in much better condition. If it were, men who are known to think lightly of obligations entered into would be scorned by their fellows, as they deserve it. And there is a practical reason why this should be the case, for how can an employer trust a man who has broken faith with another for a small inducement? Is the man not just as likely to leave him in the midst of work when he can least be spared, if somebody else makes an offer that appears a little more advantageous?

"The blame for the existing state of things rests, therefore, not entirely upon the apprentices. If young men see that their elders act in this way, it is only natural that they follow their example. And they are encouraged in this, we are sorry to say,

by some employers who do not hesitate to take away the apprentices of others as soon as they have learned something. The first step to be taken is, therefore, a rigid enforcement of the rules of common decency and fairness. No employer should think of engaging a man unless the latter can show a clean bill of health—that is, can prove that in changing his position he does not act dishonorably. Strict adherence to this rule must insure to the lasting benefit of the employers themselves, though it may once in a while cause the loss of a temporary advantage.

"But, of course, work in this direction will not only take a long time before it makes itself felt, it is also to some extent idealistic, requires constant self-denial on the part of many individuals, and is therefore to some extent problematical. For this reason a more practical way should be found, a way that does not appeal to a sense of honor first to be developed, but that binds the apprentice down with iron fetters, and compels him to serve out his time. And in our opinion nothing will accomplish this but the rule that no apprentice is taken unless he is willing to indenture himself to his employers, in this case his teachers, for a certain length of time. There is no injustice in this demand, for it will only compel the boy to pay very moderately for what he has received and no hardship because it will be a lasting benefit to him if he is compelled to learn his trade thoroughly before he starts out for himself. It seems to us that the time has come when this step should be earnestly considered, when employers as well as employees would make this question the first to be solved. It is a burning one, and the evil increases from year to year.

"Unless measures are taken to check it, every one connected with the trade must suffer, the number of half-trained, superficial and incompetent workmen will have increased to such an extent that the standard of the art in this country, the quality of the work produced and the earnings of the men must steadily decrease. And it is hardly necessary to mention here how difficult it is to elevate an industry after once it has deteriorated. It is easier to build up than to rebuild what has been neglected and fallen in decay.

"Perhaps many of our readers may think our views more pessimistic than the fact warrants. Perhaps they are a little exaggerated, but the evils we have pictured exist and cry for redress—nobody will deny this. And is it not better to act in time and check an incipient growth, instead of waiting until it has eaten into the vital parts and poisoned the blood? If the pound of cure is not needed yet, it is at least time to employ the ounce of prevention without waiting another day."

THE CANADIAN ANNUAL REVIEW OF PUBLIC AFFAIRS.

The last edition of the Canadian Annual Review of Public Affairs, by J. Castell Hopkins, has just been issued, and if possible, it is even more creditable than the numbers preceding. Over six hundred well printed pages are dedicated to a concise, fair and most ably edited review of the important political, historical, religious and national events generally of the year ending 1904. The history of Canada's industrial progress as well as other matters of especial interest to manufacturers including the tariff question, the Railway Commission and its work, the reciprocity movement in the United States, and Canadian opinion in respect of Imperial Preference are carefully reviewed from their various view points. Foreign events of especial interest to Canadians as well as the salient facts in many other matters of national import, are also faithfully recorded. While there is nothing superfluous, nothing on the other hand seems to have been omitted and herein consists one of the most valuable features of the work.

The volume contains fine half tone portraits of many of Canada's prominent men, as well as of distinguished personages of Great Britain and other countries who through the year have been connected with Canadian affairs. A well planned table of contents and two indexes (Index of Names and Index of Affairs) facilitate access to the data given, while the whole is tastefully and strongly bound in both cloth and morocco.

Those who would preserve a faithful record of Canadian events should provide themselves from year to year with this really excellent compilation. The Annual Review Publishing Company, Limited, St. James Chambers, Toronto, are the publishers, and the prices are respectively \$3 and \$4.

SCIENTIFIC NOTES.

To Weather-Proof Stone and Metal.

One of those pieces of news that may turn out to be important and so cannot well be ignored, although it awaits authoritative confirmation, appears in the daily press in the shape of a London cable despatch announcing the discovery by an Hungarian chemist, Brunn by name, of a liquid chemical compound that renders certain substances proof against the effects of time. It is said to water-proof stone, to make metals rust-proof, and also to act as a germicide. Says *The Sun* (New York):—

"The professor says that while travelling in Greece some twenty-five years ago he noticed that the mortar in stones of ruins which were known to be over 2,000 years old was as hard, fresh, and tenacious as if it had been made only a year. He secured a piece of the mortar and has been working on it ever since until now, when, he says, he has discovered the secret. The compound is a yellow liquid, which the professor has christened "Zorene."

"An interviewer describes the following experiments: A piece of ordinary and easily breakable slag after immersion in zorene defied the full blow of a hammer. There was the same effect on ordinary bricks and a block of red jarrah wood. All three were then immersed in water for a long time. When taken out and weighed with delicate scales the presence of a single particle of added moisture could not be detected. Two pieces of steel submitted to an ammonia test equal to five years' exposure to the air emerged from the bath as they entered it. An ordinary table-knife which had lain open five months did not show the slightest stain.

"Professor Brunn asserts that he will be able to make dust-germ-proof, water-proof roads, giving a commercial value to hundreds of millions of tons of slag which is now useless in the mining and smelting districts. It will at the very least double the life of metals exposed to the air such as in bridges, railroads, vessels and tanks."

It is suggestively added that the inventor refuses to reveal the composition of his liquid, but it is said that a committee representing the railways and iron and steel manufacturers will soon make a thorough test of the discovery.—*The Literary Digest*.

New Power Scheme for Niagara.

An engineer of Jamestown, N.Y., by the name of Thurston, has a new power scheme for Niagara Falls. The following is his letter to *The Scientific American*:—

"I take here the liberty to describe a method for utilizing the greater part of the energy in the falls without injuring in the least the beauty of the falls and without necessitating any engineering structures in the vicinity of the falls. Suppose a dam, constructed across Niagara River, a few miles above the falls or at the beginning of the river. Let the gates of the dam be closed half of the time and opened half of the time, making the river flow, say, for instance, twelve hours in day-time. There would be no danger of overflow, when the gates are shut with the large area of Lake Erie above the dam. It is evident that twice the regular flow of the river could be extracted from Lake Erie in the daytime. Let the regular flow pass over the falls and take a quantity equal to half the regular flow continually for power purposes. This would give about 3,500,000 horse-power without injuring in the least the beauty of the falls. The gates of the dam could be open, say nine hours in the day and three hours in the night, in order to make it possible to see the falls also at night. It seems to me that if these arrangements were possible, it would give a great amount of power and at the same time save the destruction of the falls."

Labor Column

PROFIT SHARING—SOME RESULTS.

Bad business has stopped the workings of the United States Steel Corporation's profit-sharing plan. Official announcement was made in New York last week that the plan adopted two years ago, though still in force so far as future hopes are concerned, would have to be ignored until business improved and all possibility of a war of steel prices is removed.

The corporation, it was announced, is not coming up to requirements as to net earnings, and the profit-sharing plan is therefore temporarily ineffective. The profit-sharing plan is effective only when the net earnings exceed \$80,000,000 a year.

Rumors have been prevalent for some time that the United States Steel Corporation had abandoned its profit-sharing plan, which was instituted in December, 1902. An official denied that report, but admitted that interest in the matter had sagged to a minimum, so that the scheme was now little discussed.—*National Labor Tribune*, Pittsburg, Pa.

In discussing the profit-sharing plan of the Pittsburg Coal Company, J. B. L. Hornberger, President of the Association, said:

"The Pittsburg Coal Company's profit-sharing plan, which was put into operation in the latter part of 1900, is working out very satisfactorily to all concerned, and without any modification or change in the original form in which it was presented to the company's employees.

"Under this plan employees purchase preferred stock of the company through the Pittsburg Coal Company Employees' Association, and pay for the same at the rate of \$1.00 per month per share. They have the privilege of withdrawing from their contracts at any time upon 30 days' notice, and when withdrawals are made purchasers receive back the full amount of their payments, together with interest at the rate of five per cent. per annum. A new series of stock purchase contracts begins the first day of each month. Since December 1st, 1900, there have been 45 series of stock purchase contracts, the first three of which matured on May 1st, June 1st and August 1st, 1904, respectively.

"The Association purchases the company's preferred stock on the market from time to time, and the dividends paid on the stock so purchased accrue to the individual purchasers, all expenses of the Association being paid by the Pittsburg Coal Company. The earnings thus accumulated by the Association during the first 45 months of its operations, or up to July 31st, 1904, aggregated \$106,516.30. These earnings are divided pro rata among all the purchasers who continue their monthly payments until contracts mature.

"The contracts which have matured and on which delivery of stock has already been made, cover 1,553 shares, leaving in force at this time 1,020 contracts, covering 8,152 shares.

"The benefits to the employees under this plan are direct and substantial. While the benefits to the company are indirect, they are none the less substantial and altogether satisfactory. At the end of four years' experience it may be said of the Pittsburg Coal Company's profit-sharing plan that it is eminently successful."—*National Labor Tribune*, Pittsburg, Pa.

President Samuel P. L. Colt's presentation in his annual report to the stockholders of the United States Rubber Company of the details of the "profit-sharing" plan for the company's employees devised by the executive committee calls attention to the fact that many important companies now have such plans based

upon the idea of inducing employees to become stockholders through offering to them advantages in the matter of subscription to stock. The employees are permitted if they join in the plan, to pay for the stock allotted to them in instalments, and should they for any reason decide not to go on with such payments, they are permitted to withdraw the money they have already paid in, with interest upon it at a certain rate.

This in the main is the basis of these so-called profit-sharing schemes. One of the oldest of such plans is that which the management of the Illinois Central Railroad put into effect in May, 1893. At that time the company's stock was selling well under par, and the employees who subscribed at the terms offered secured a very advantageous investment, for Illinois stock is now quoted at close to 130. Employees all along the company's line have one or two share lots of the stock and the management believes that the plan has done much to interest the general body of employees in the success of the company.

The success of this plan has led other large corporations which have had the institution of similar schemes under consideration to consult with the Illinois Central officers as to its details. This was notably the case with the United States Steel Corporation management prior to that corporation putting into effect its stock investment scheme for employees. The Steel Corporation's plan has been criticized in some quarters because, since December 31st, 1902, when by circular the corporation offered the preferred stock to the employees at a subscription price of \$82.50 a share, the market has been sold heavily, being now around \$53 a share. The Steel Corporation's plan is very elaborate, dividing for purposes of subscription the 168,000 employees into six different classes, the amount of stock each man is permitted to subscribe for representing a percentage of his annual salary. Dividends on the stock go to the subscriber from the date he commences to make payments on account of his subscription, interest at 5 per cent being charged on deferred payments. In case he discontinues payments before the stock has been fully paid for, he can withdraw the money he has paid on account of principal and may keep the difference between the 5 per cent. interest he has paid and the 7 per cent. dividend he has received on the stock. There is also a tontine system provided for the further benefit of those employees who after they have fully paid for and received their stock certificates do not sell or part with them.

The Illinois Central's plan is somewhat simpler. Under it on the first day of each month the company quotes to the employees through the heads of their departments, a price at which their subscriptions for stock will be received that month. Employees have the privilege of subscribing for one share at a time, payments being made in instalments of \$5, or any multiple of \$5, and on completion of his payments the employee gets his stock certificate for one share to do with it as he pleases. After that he can, if he wishes, begin the purchase of another share on the instalment plan. While making payments, employees are allowed 4 per cent. interest on their deposits.

A number of other large western corporations have had "profit-sharing" plans arranged on generally similar lines in operation for several years. Swift & Company, the packers, are a notable instance. Proctor & Gamble, the soap makers, also have a plan of this character.

In the case of the United States Rubber Company's plan about 150 of the principal employees will be asked to join. They will be permitted to acquire a certain number of shares of the preferred stock at \$45 a share and interest, and of the common stock at \$10 and interest, provided they remain in the company's employment for a certain period.—*Shoe Workers' Journal*, Boston, Mass.

Foreign Trade News

Mexican Market for Furniture.

Very few attempts have been made to develop the opportunities awaiting manufacturers to supply the demand which exists in Tuxpan and in the surrounding country for a medium grade of light, well-made, but not expensive furniture, which will not be affected by climatic conditions. The local United States consul suggests that rattan and willow ware would meet with most favor, but cottage furniture in light shades and attractive models would be very popular. The hand-made furniture of the Mexican carpenter is lacking in artistic design, and is very crude and unsatisfactory, as it is made by inexperienced workers who have only the roughest kind of materials to work with.

cess, the regulation having been postponed until September. Mr. Reeves suggested this postponement to the New Zealand Government on being approached in the matter by the Walsall Chamber. It is possible that the regulation will not be enforced even then, as in the meanwhile the Government will have time to give the Walsall and other representations on the subject full consideration.

Silence is Golden.

A circular letter has recently been issued in Prussia to manufacturers and their agents warning them against giving information of the condition of the markets and of manufacturing

CANADA'S FINE EXHIBIT AT LIEGE



English and United States tourists who have visited the Liege Exhibition are unstinting in their praise of the Canadian exhibit. They declare it to be the most comprehensive and attractive in the exhibition, and in every way effecting a most important work in advertising the resources and commercial accomplishments of the Dominion.

His Majesty, the King of the Belgians, on the occasion of his official visit to the Canadian pavilion, said that while he did not wish to see any of his people leave their country, he would prefer, if they did, that they would go to Canada.

North-West Butter for Japan.

The production of creamery butter in Alberta is growing enormously. The creameries there manufactured over 50,000 pounds in May, as compared with 23,000 pounds for the same period last year.

The North-West's butter trade with Japan is also showing satisfactory increase. One steamer recently carried 9,000 pounds to Japan, whereas formerly the total quantity going from Canada in a year did not exceed 2,000 pounds.

New Zealand Customs Regulation.

The protest of the Walsall Chamber of Commerce against the regulation recently made by the New Zealand Customs authorities, requiring goods imported into New Zealand to be accompanied by the original manufacturers' invoices has met with suc-

cess, the regulation having been postponed until September. The following is an extract from the letter:—"The reports in our technical and trade papers are most assiduously studied abroad, and by representatives of our foreign competitors residing in Germany. * * * The articles published in our journals and trade papers should not state the selling prices of our manufactured goods, how their cost compares with that of similar goods produced in competing countries, of what ingredients the articles are composed, what the tariff rates are, etc. Such detailed reports, which often expose even the secrets of manufacturing, form an excellent weapon in the hands of our competitors, and serve to injure German business interests. All public reports should refrain from giving details. No complaint about bad business should be published, as this is hurtful to our export trade. * * * The circular concludes with the suggestion that German factories should be kept closed to foreigners.—*Hardwareman*,

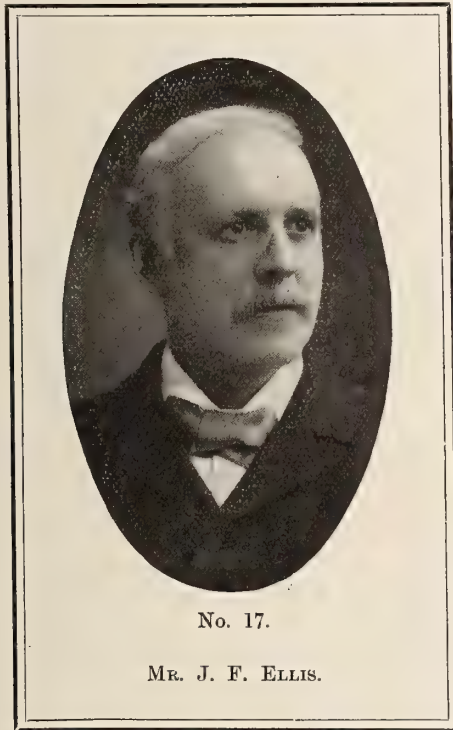
Among the Industries

MANUFACTURERS OF CANADA.

A MAN of untiring energy, keen foresight and rare executive ability is Mr. John Fitzallen Ellis, who for so many years has guided the destinies of the great and well-known manufacturing concern, The Barber & Ellis Co., Ltd., of Toronto.

Mr. Ellis was born in 1845, and, like the Hon. Arthur Hardy, Professor Bryce, and the venerable Dr. Nelles, claims as his birthplace the picturesque village of Mount Pleasant, in the county of Brant. He was educated at the Mount Pleasant Grammar School and the Normal School of Toronto and, after a short experience as school teacher, he, at the age of twenty-three, took up the line of work in which he has been so notably successful.

It was with the firm of A. Dredge & Co., of Toronto, that Mr. Ellis learned the paper and stationery trade, and when in the course of a few years Messrs. Dredge & Co. retired, the



estate was purchased jointly by Mr. Ellis and Mr. James Barber, of Georgetown, and the firm of Barber & Ellis came into existence.

From its inception, the business of the new firm prospered and in 1880, after Mr. James Barber's interest had been purchased by Mr. John R. Barber, it was formed into a joint stock company as the Barber & Ellis Co., Ltd. From that time the development of the business under Mr. Ellis' able management has been phenomenal, as will be seen from the fact that in one department alone—the manufacturing of envelopes—their output has increased since 1880 from 100,000—at that time considering a large number—to the enormous figure of something over 1,000,000 per day, the whole of which immense output is disposed of in the Canadian market. When it is remembered that within ten years the number of letters passing through the Canadian mails has increased from 107,000,000 to 260,000,000 per annum, the present large home consumption of this article will be readily understood.

Like many others of our prominent business men, whose success has been the realization of their own faith in Canada and her commercial possibilities, Mr. Ellis has always been a strong protectionist and an advocate of the principle of making in Canada the goods required by the Canadian people. As president of the Toronto Board of Trade in 1903 and 1904, he did much to further the manufacturing interests of Toronto and the province generally, and while president of the Canadian Manufacturers' Association in 1899-1900, it was under his wise supervision that the Association was reorganized and its great forward movement begun.

The Robb Engineering Company has received an order from the Dominion Coal Company for two 100-horse power Robb-Mumford boilers.

According to Detroit papers the United States Steel Corporation will erect their proposed \$10,000,000 Canadian works at Sandwich instead of Sarnia.

It is reported that a syndicate of Philadelphia capitalists have purchased the sphagnum peat bog at Cannington and are preparing to erect a large plant for the manufacture of peat board.

The rice industry in British Columbia has been revived by the B. C. Rice Mills, who are again operating, preparing rice both for domestic and export trade. Their present capacity is five tons of rice per day.

The Vanstone Heating and Plumbing Company, Limited, of New Westminster and Vancouver, B.C., have lately received important contracts for the installation of heating and plumbing systems in the Dominion public buildings of Nanaimo, B.C.

Another rain and waterproof garment manufacturing firm has commenced operations in Montreal, under the firm name of the Albion Rubber Co. Those interested are experienced men. Offices, salesroom and factory are located at 31-31A St. Lawrence Street, Montreal.

The Penberthy Injector Co., Limited, of Windsor, are manufacturing a brass body force feed oil pump for traction engines or any work where a pump is subject to hard usage. They claim for it simple construction, economy of oil and a double life owing to the special interchangeable satchels.

J. H. Wetthey, Limited, St. Catharines, have recently added a canned vegetable and fruit department to their present business which has been exclusively confined to their well-known brands of mince meat. A five acre site has been procured alongside of the G. T. R. and I. C. R. tracks, thus affording excellent railway facilities. The new department is now operating, and "Laurel" canned goods bid fair to become well and favorably known.

The Nova Scotia Steel Co. directors have practically decided to remove their entire steel plant from New Glasgow to Sydney Mines, having been put to a great deal of unnecessary expense by maintaining two large plants in operation. By this removal the company will have its whole works centralized, which means a material reduction in the cost of production. The iron ore, instead of being taken to Pictou, will be landed at North Sydney, a shortening in the transportation of from 200 to 300 miles, and enabling them to land fully twice as much as at present. The company is drawing its steel workers from New Glasgow, about thirty having left to work at the new smelting furnaces at Sydney Mines. One of the furnaces at Trenton has already been taken down and removed to Sydney Mines, where the new plant is rapidly assuming practical shape.

The Winnipeg Fur Co., with a capital of \$100,000, has been incorporated in that city. Arch. Wright, J. A. Knott, J. A. Wright, Mary Wright, and L. H. Knott, are the directors.

The White Mfg. Co., Limited, have been incorporated with a capital stock of \$45,000. The company have taken over the business of White & Smith, Ottawa, and will continue to manufacture and sell clothing and dry goods.

Negotiations are in progress for establishing in Toronto a branch of a British textile manufactory. The Peacock File Company of Buffalo are looking for a Toronto site for a Canadian branch; and it is reported that a Galt machine company will remove to Toronto if favorable terms are offered.

TRADE ENQUIRIES

NOTE.—For further information regarding any enquiry mentioned under this heading or the names of enquirers, apply by number to the Secretary, at Toronto.

44 **AGENCIES, Havana, Cuba**—A company of commission and general merchants in **Havana, Cuba**, has been formed for the sole purpose of establishing an agency business and offer their services to any Canadian firms wishing to develop Cuban business. References are forwarded.

45 **London**—A correspondent in **London, England**, seeks the representation of first-class Canadian houses. He has an established connection among buyers of builders' material, viz., timber merchants, builders, ironmongers and general builder providers, doors and sashes are particularly mentioned.

46 **London**—A company of general merchants and manufacturers' agents in **London, England**, already representing English, United States and German houses are anxious to make Canadian connections. They wish to establish business now in the expectation that Mr. Chamberlain's policy, if it comes into force, will return much trade toward the colonies.

47 **London**—A colonial and foreign buyer and manufacturers' agent in **London, England**, able to furnish good references, desires to act for Canadian houses requiring the services of such a representative in England.

48 **St. Georges**—A correspondent in **St. Georges, Grenada, B. W. I.**, acting as representative for a number of firms, desires to communicate with Canadians in a position to extend their business to that island.

49 **Sunderland**—A correspondent in **Sunderland, England**, naming his Banking House as a reference, desires to communicate with Canadian firms wishing representation in England.

50 **Asbestos**—A **London, England**, house makes inquiry respecting Canadian consignments of asbestos fibre.

51 **Asbestos Boiler Coverings, Fibre Cloth, Rope Lagging, Etc.**—A company in **London, England**, carrying on a business of boiler cleaners, and boiler and pipe coverers, desire to purchase the above named goods delivered London in lots of about ten tons.

52 **Baskets, Wicker**—A Canadian manufacturer desires to purchase baskets on wheels for warehouse use.

53 **Building Material**—A **London, England**, agent desires to undertake the representation of Canadian firms supplying goods more particularly used in connection with the building trade.

54 **Caseine**—A company in **London, England**, carrying on a wholesale glue and gelatine business since 1897, desires to purchase caseine. They name their bankers as reference.

55 **Furniture**—A large Canadian shipping firm recommends to Canadian manufacturers a gentleman in **Mexico City** who is prepared to undertake the representation of Canadian exporters of furniture.

56 **Furniture, Stoves, Curtains, Sewing Machines, Hollowware, Bicycle, Etc.**—A **Nelson, New Zealand**, commission and general merchant desires to get into touch with Canadian manufacturers of the above and other articles.

57 **Handles, Tool**—An export commission merchant in **New York City** asks for the names of Canadian manufacturers of tool handles to fill orders in South American countries.

58 **Hardware and Provisions**—A firm of merchants and commission agents in **London, England**, are desirous of representing Canadian shippers of articles handled by the hardware and provisions trade. This company claim to have good connection and offer to provide particulars and references to any firm desirous of taking this matter up.

59 **Hardware, Woodenware, Household Goods, Kitchen Utensils**—A firm of sales agents and export commission merchants in **New York City**, who are doing a large business particularly with England and the Continent in the above lines and also in dry goods and fancy articles, are desirous of extending their Canadian connections and ask to be put in communication with any manufacturers prepared to handle export business. This house has branch offices in London, Paris and Hamburg.

60 **Metal Furniture, Office Equipment, Fruit Jars**—An export commission house in **New York City** desires to purchase the above named lines from Canadian manufacturers for shipment to South African clients.

61 **Ore, Zinc**—A Canadian company asks for the names of miners in a position to export the above named ore.

62 **Paper, Printing and News**—An indent agent and manufacturers' representative in **Wellington, N. Z.**, desires to get in touch with a firm of printing and news paper manufacturers with the idea of securing representation for New Zealand. The tariff preference on paper makes it almost necessary to import it from within the British Empire.

63 **Screens, Window**—A firm in **Capetown, S.A.**, makes enquiry for the names of Canadian manufacturers in a position to supply adjustable wire window screens for shipment to South Africa.

64 **Shoes, rubber**—A **Barcelona, Spain**, importer wishes to correspond with manufacturers in Canada of rubber shoes.

65 **Windmills, Pumps, Tanks, Galvanized Pipe and Fittings, Automobiles, Bicycles**—A waterworks contractor and agent in **Malmesbury, Cape Colony** who has been doing business with United States houses, asks for particulars with export prices on the above lines. He is also open to introduce new lines of goods and has facilities for carrying sample stocks. Malmesbury, it is stated, is the centre of an area covering several hundred square miles.

66 **Window Screens, Canned Fruits, Dried Apples**—A company of warehousemen and shipping and customs agents in **Cape-town, South Africa**, asks for information regarding the above lines from Canadian shippers. Their usual method of introducing goods is to carry stocks in their warehouses either in bond or duty paid. Their remuneration is by charging a commission on actual sales. They speak enthusiastically about the possibilities of doing a large business in wire window screens, which have as yet hardly been introduced in the South African market. They also state a good opening exists in the other lines mentioned. References are forwarded.

67 **Woodpulp and Paper**—A **Hamburg, Germany**, firm desire to work up agencies for Canadian woodpulp, wrapping and printing paper, etc.

CORRESPONDENCE

Contributions are invited on subjects of general interest, but the Canadian Manufacturers' Association does not hold itself responsible for the opinions expressed by its correspondents.

THE FIRST CANADIAN PORTLAND CEMENT WORKS.

Editor INDUSTRIAL CANADA:

In your issue of June last, which only came to my notice a few days ago, in speaking of the cement industry in Canada you say that the first Portland Cement manufactured in Canada was manufactured in 1891 at the works at Marlbank and Shallow Lake, both in Ontario. This is an error, as there was a plant manufacturing Portland Cement at Napanee Mills, now Stratheona, Ontario, at that time and had been manufacturing cement for a period of two years. At this place the first of the now famous Rathbun's Star was made. At the time the works there were under the management of Mr. E. Bravender, who had made Portland Cement there at first experimentally using a blue clay that he found near Napanee Mills and marl from the deposits at Marlbank. At this time, 1891, there was a plant using the old wet process making a stiff slurry, running it through a pug mill that formed the slurry into bricks and drying in dry kilns heated with steam. This plant had three bottle kilns and was afterwards enlarged by the addition of a Dietch continuous kiln. The cement manufactured there was exhibited at the World's Fair in Chicago in 1893, when it won the Gold Medal, and I have no doubt that by referring to the Messrs. Rathbun who were at that time the owners of the works, that you can satisfy yourself of the correctness of this statement. In 1894 Mr. Bravender left the works there and went to the works of the Empire Portland Cement Company located at Warners, N.Y. Some years ago he became interested in the Lakefield Portland Cement Company, with which he is now connected.

I write this merely to correct an erroneous impression as to who was actually the first manufacturer of Portland Cement in Canada on the ground of honor to whom honor is due. I am,

Yours truly,

ALVIN R. BRAVENDER.

Lakefield, Ont., Aug. 17th, 1905.

PARTNER WANTED IN MACHINERY MANUFACTURING BUSINESS IN VANCOUVER, B.C.

On account of the death of J. M. K. Letson of the firm of Letson & Burpee, Limited, one half interest in this business is now offered for sale.

This firm commenced business in the fall of 1896, it being then a partnership composed of J. M. K. Letson and F. W. Burpee, both practical mechanics and the patentees of a valuable labor saving machine in the salmon canning industry. For the first few years their attention was devoted particularly to salmon canning machinery. In this line they invented and were granted patents on many valuable machines, the adoption of which has revolutionized the methods of canning salmon.

There was soon such a demand for these machines in the United States, that, in the year 1900 a branch of the business was established at Fairhaven, Wash. Later the business was organized into two joint stock companies, the United States business being kept distinct from the Vancouver. It is a half interest in the Vancouver business that is now being offered for sale, including six valuable lots centrally located.

The canning machinery of which this firm controls the patents has proven such a success that it now practically controls the market and considerable business has been done in this line in Australia, China and Japan.

Besides the canning machine patents, Letson & Burpee, Limited, also manufacture a patented shingle machine for which there has been a good demand.

Financially the business has been a great success. From a very small beginning steady progress has been made till now they own two of the best equipped manufacturing plants in the West.

For any further particulars write to

LESTON & BURPEE, LIMITED.

Vancouver, B.C., Sept 9th, 1905.

LEAD-BORING INSECTS.

Our first surprise at learning that there are insects able to penetrate lead is increased, on the second thought, by a feeling of wonder that any insect should desire to do so. Apparently the Australian insects that have this propensity always wish to get at something on the other side of the lead—either food or that which is still more desirable, personal liberty. In doing so, however, they play havoc with the lead-sheathed Australian telegraph wires. Says a writer in *Cosmos* (Paris):—

"At first the presence of holes in these coverings was not attributed to the attacks of living creatures, and no one certainly could have conceived that feeble insects could accomplish a destructive work of this kind. Atmospheric electricity was held responsible, and the method of suspension of the conductors gave some grounds for such a hypothesis. These cables are hung to posts with twisted steel wire connected electrically to the earth. . . . The perforations, which have now been observed since 1896, have a diameter of 1 to 6 millimeters [up to ¼ inch] and penetrate into the lead to different depths, some traversing it entirely. During the dry season these holes do not interfere with communication, but when the rainy season comes on, it becomes impossible to send messages. As this is the season of thunderstorms it was natural to attribute the trouble to electricity, and this was the opinion of experts until 1903.

"Looking a little farther, however, they finally discovered in the holes, black insects known to entomologists as *bostryacus jesuita*. All that was known of these insects was that their larvæ change color according to the substance attacked by them; all investigation to discover the manner of life of these larvæ remained fruitless.

"Mr. Rosender, engineer of the Australian telegraphs, removed several pieces of the lead that had been attacked, in order that he might study the work of destruction. He noticed at once that the larvæ preferred for their exploits the envelopes under which the cables were wrapped in tarred linen or some similar substance. The perforations are oval, and go through the lead and the wrapping beneath; if the insect had not time to complete his work there were noticed at the bottom of the hole two little parallel scratches, indicating the manner of operation of the creature. . . . Rosender observed that the perforations, or rather the attempts at perforation, were more numerous than generally supposed. He counted as many as 14 in a length of 40 centimeters (16 inches) of lead. The insect is very small and its color conceals it very effectively, so it does considerable damage to the covering."

This larva is not the only one that bores into lead, the writer tells us. Similar habits have been proved of another Australian insect, belonging to the genus *Xylapertha*, which is found usually on the eucalyptus or other hardwood trees. Still other insects are able to bore through lead, but do so only to escape outward from wood enclosed by it. Finally, the writer concludes:

"Last year, *Cosmos* mentioned injury caused on the telegraph lines of Shanghai by a species of wasp. The stings of this insect may, it appears, be compared to those of the *orthorinos* which seeks, with maternal solicitude, for submarine cables in which to lay its eggs."—*The Literary Digest*.

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VANCOUVER—JULY, 1905—WINNIPEG

Vol. 2—No. 7

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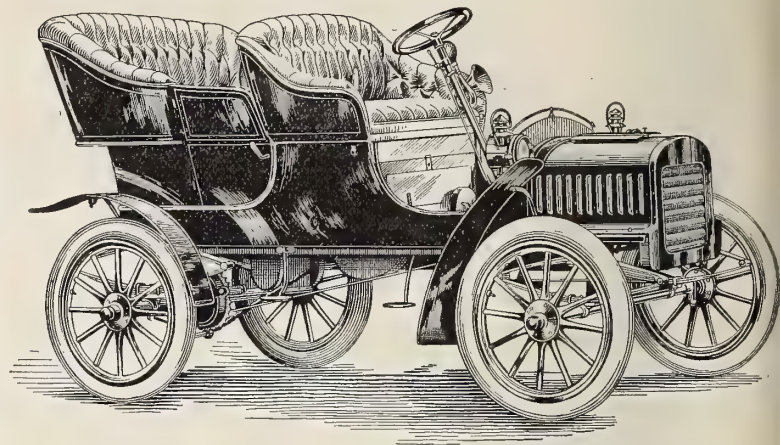
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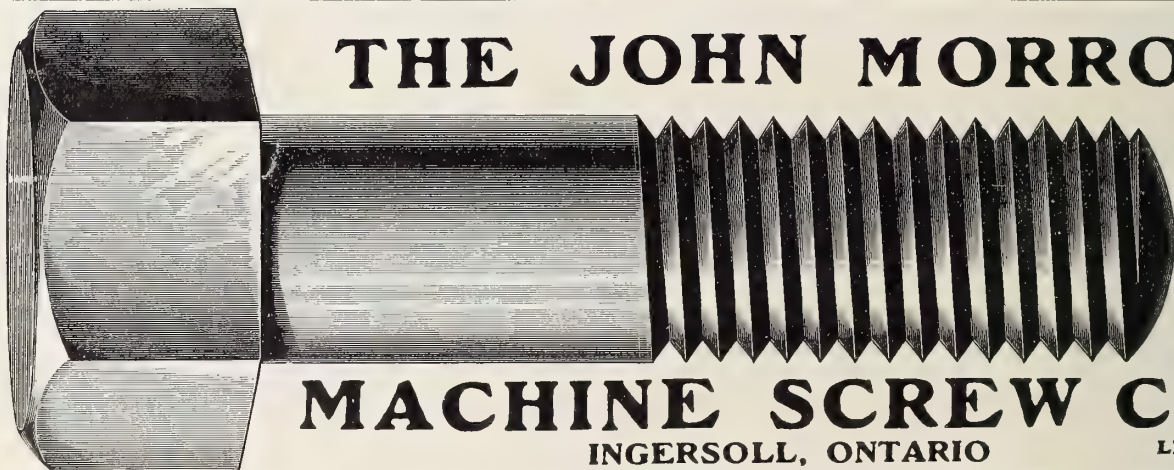
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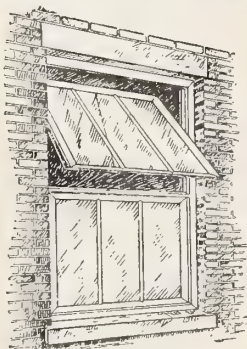
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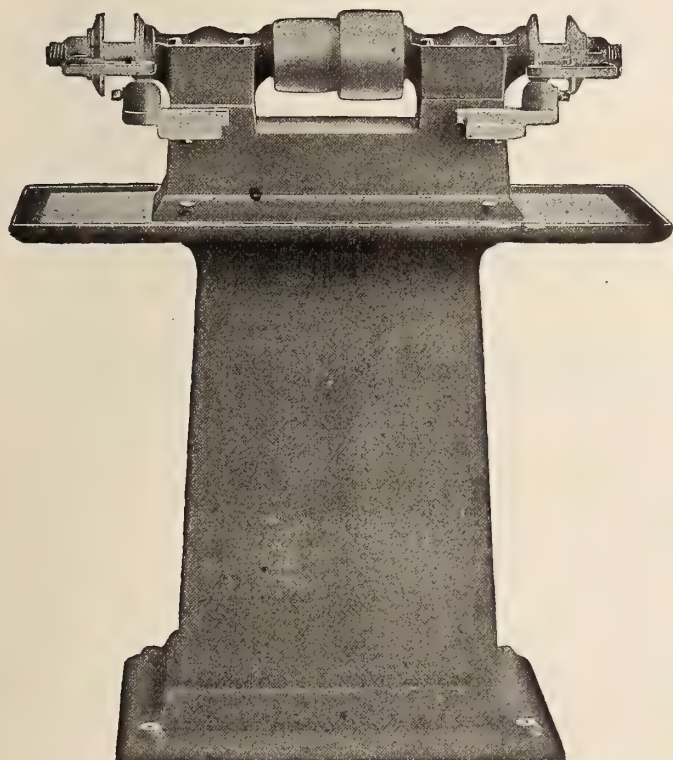


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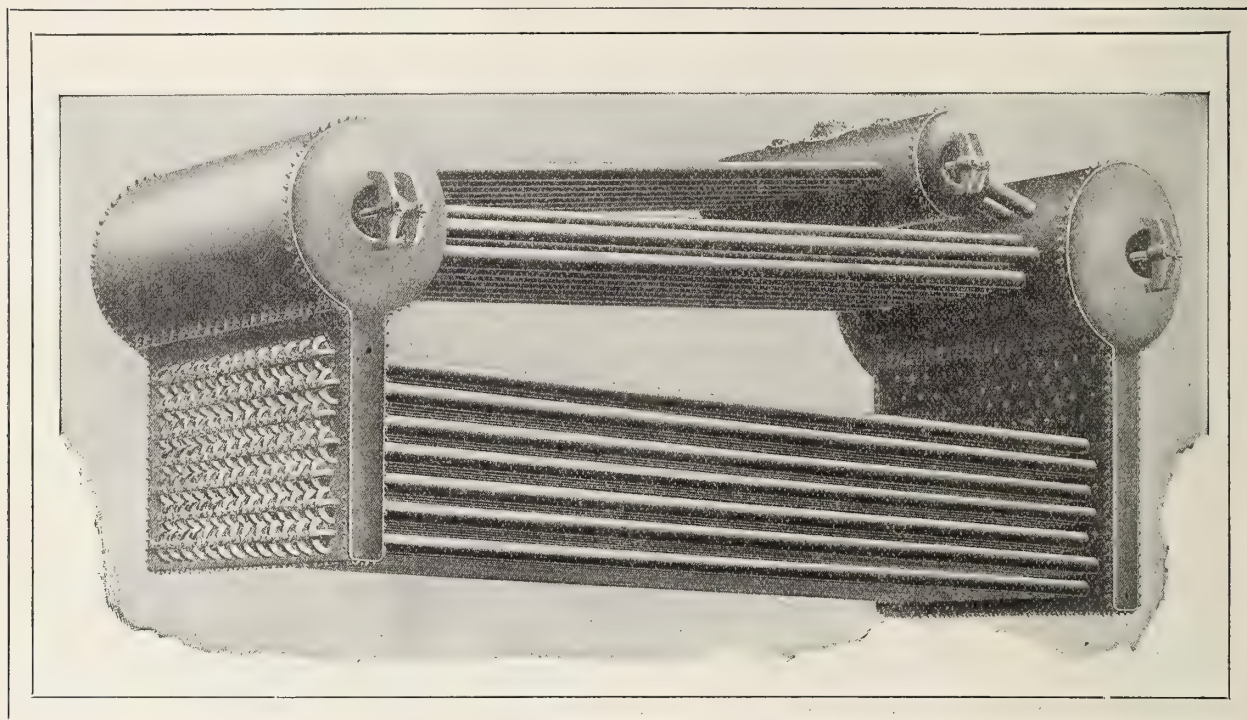
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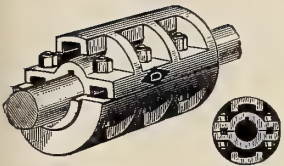
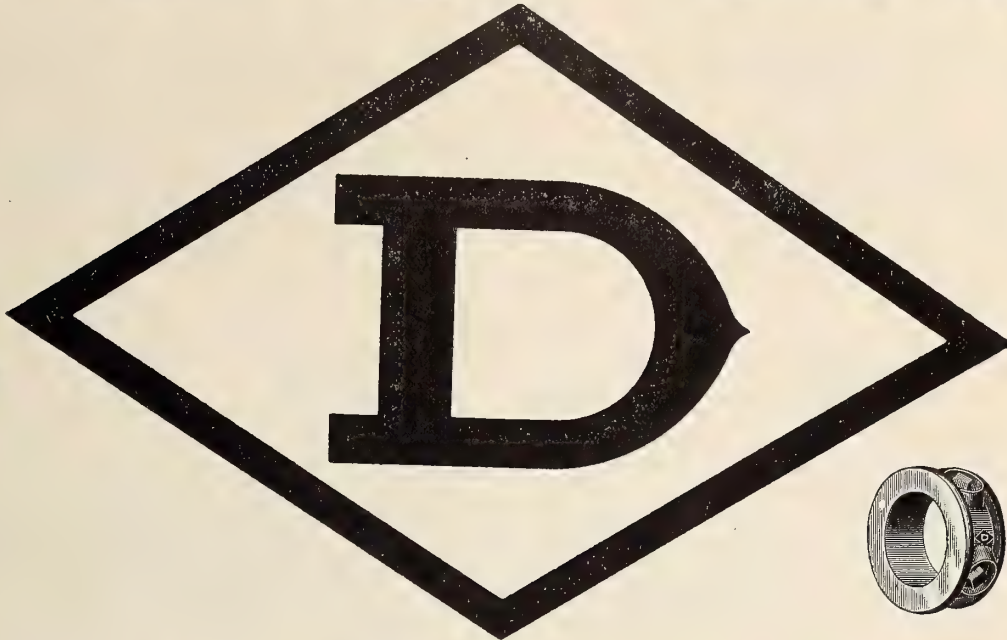
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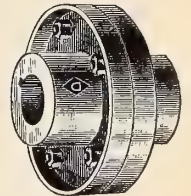
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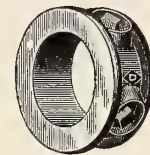
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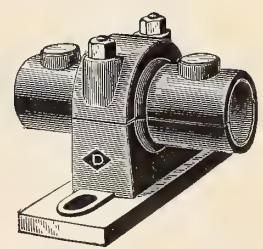
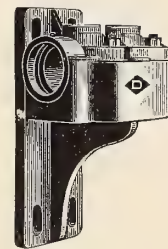
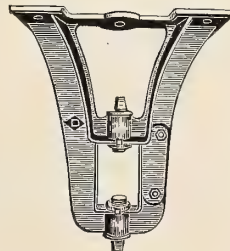
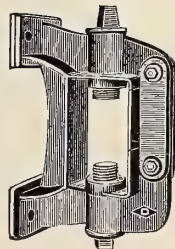
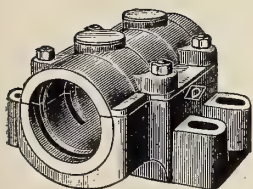


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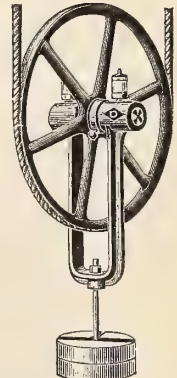
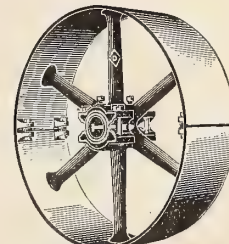
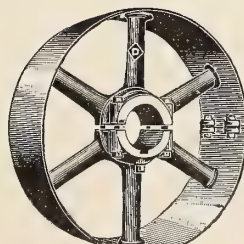
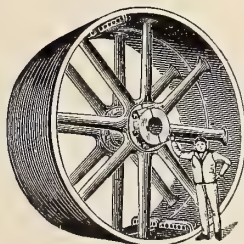
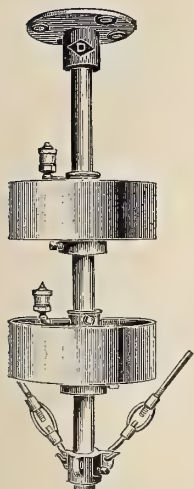


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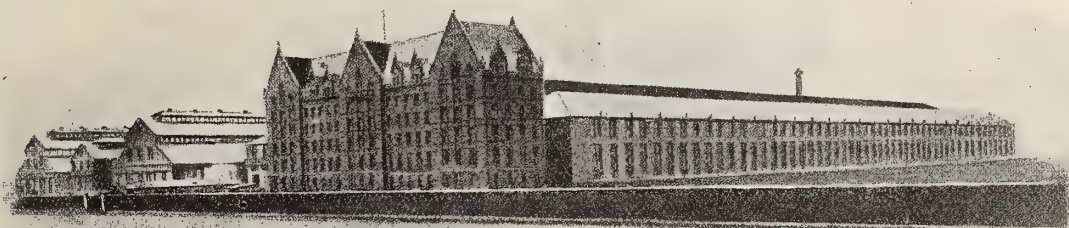
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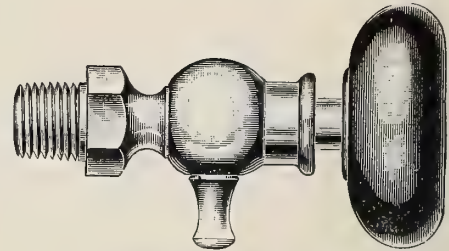
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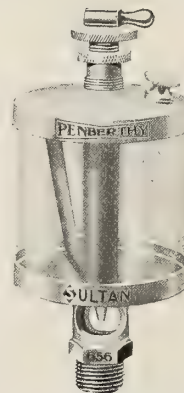
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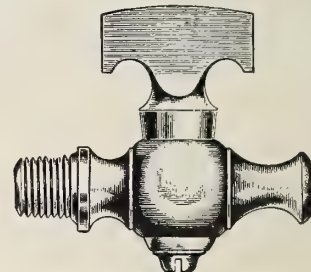
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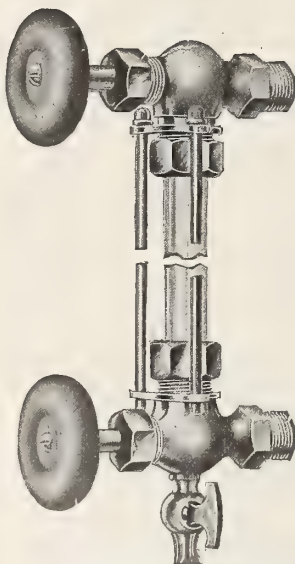
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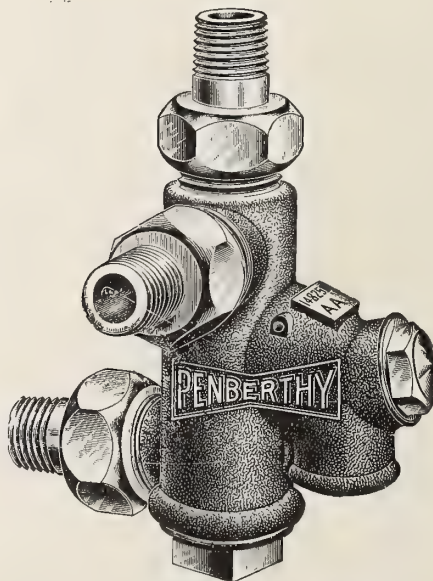
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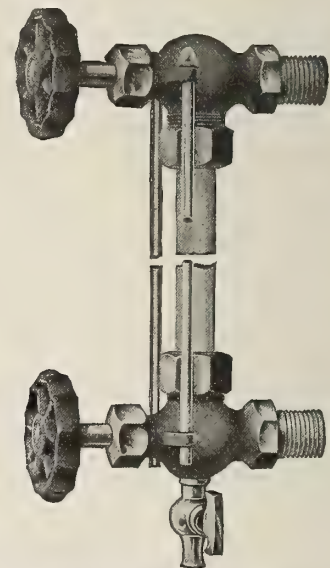
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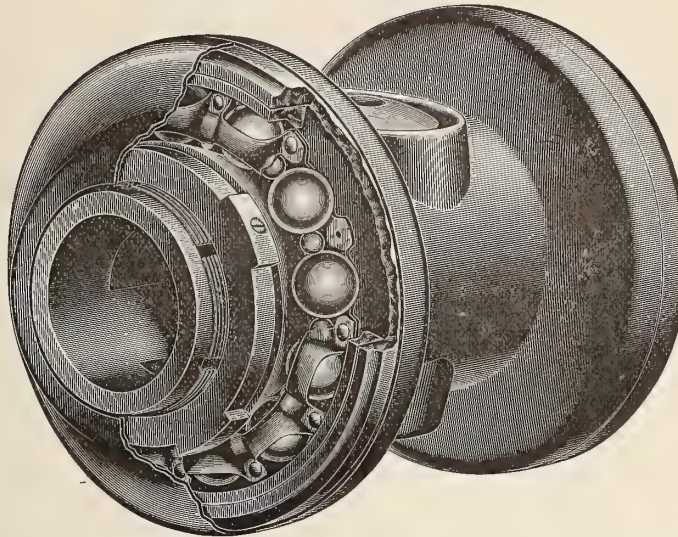
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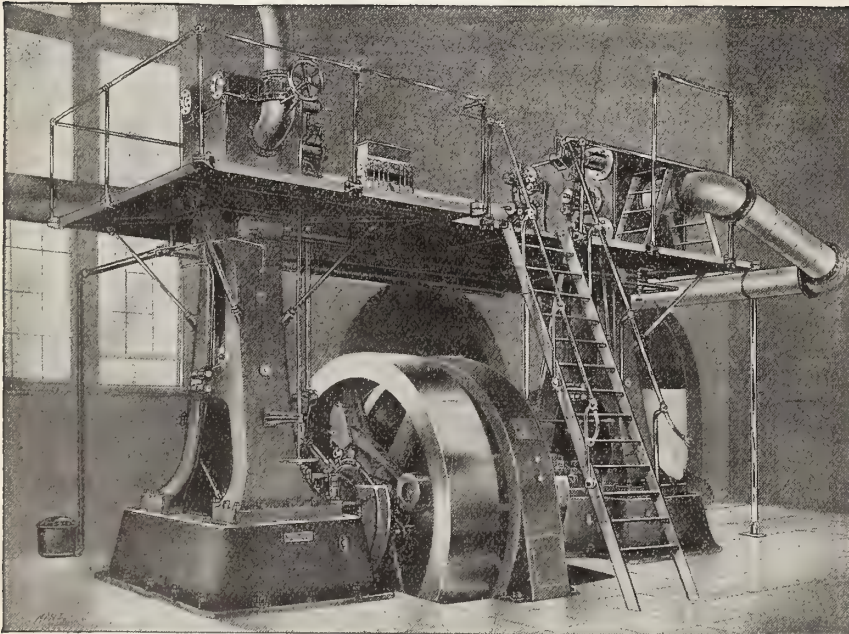
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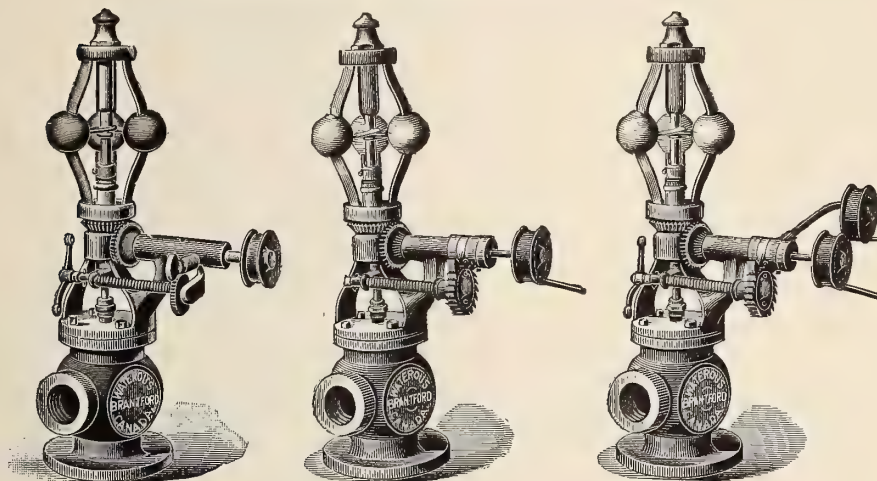
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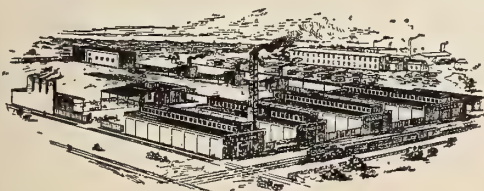
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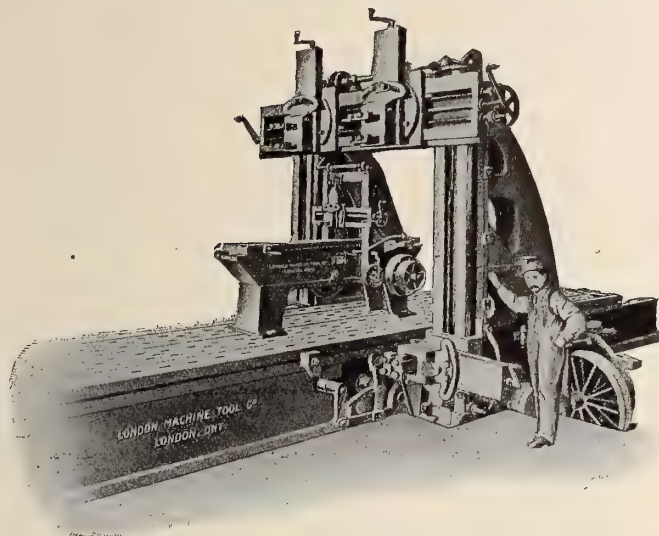
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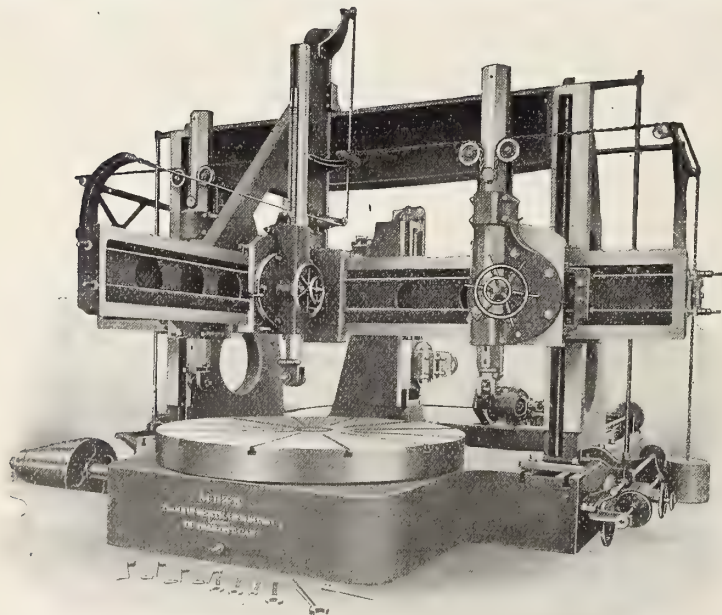
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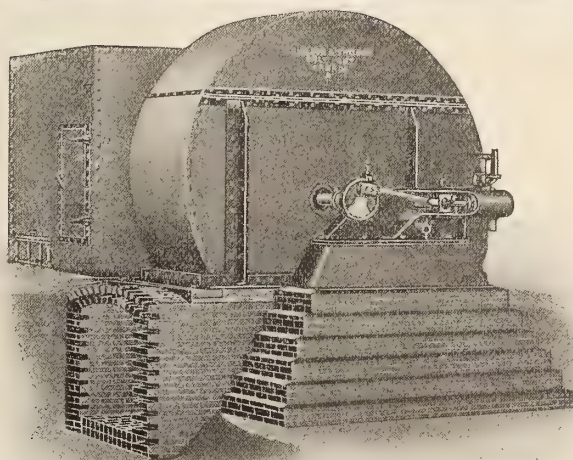
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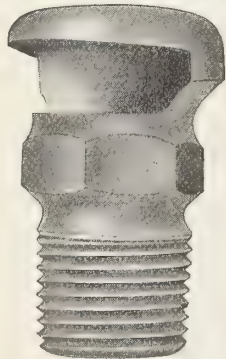
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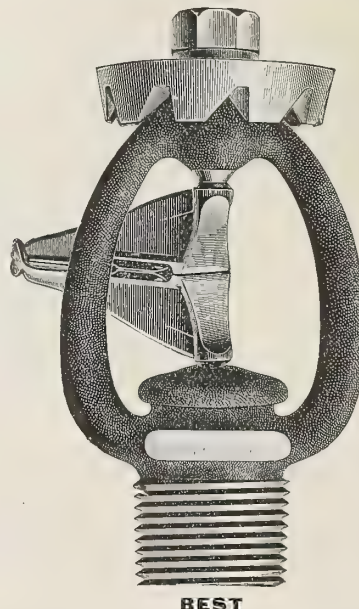
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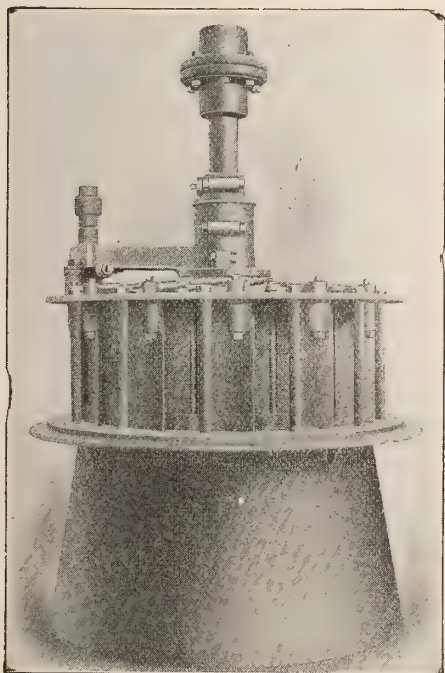
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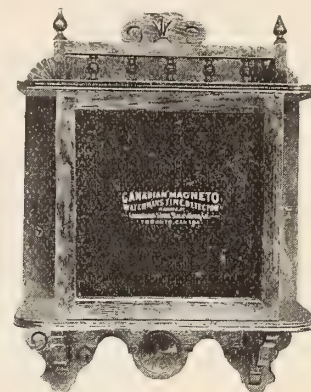
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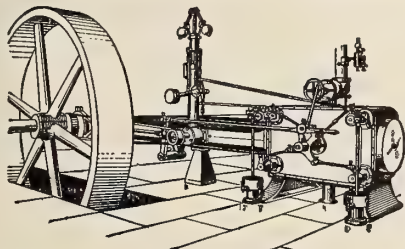
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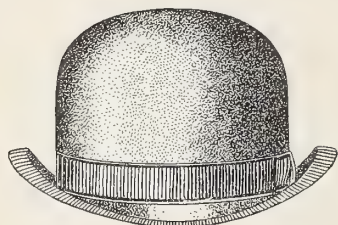
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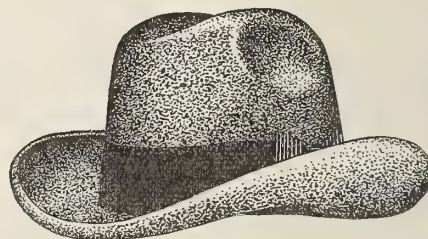


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Vol. VI.

TORONTO, OCTOBER, 1905.

No. 3

INDUSTRIAL CANADA

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THE QUEBEC CONVENTION.

FEW meetings have ever been held in Canada, which have aroused more interest in the Canadian business world, or have been more comprehensive in scope and results, than the Thirty-Fourth Annual General Meeting of the Canadian Manufacturers' Association held at Quebec last month.

The choice of Quebec as the Convention City was amply justified. The attendance was large and representative, and the programme presented involved deliberations upon a number of the most important questions in Canadian development.

The spirit of Canadianism pervaded the whole Convention, and as the new President remarked in his opening address, "no one could have attended it without being struck with the national importance of the issues discussed, and feeling that business statesmanship which characterized the discussions. Why should it not be so? Who should understand the problems of our statesmen so well as our business men? And who should understand so well the ebb and flow of prosperity or the storms of foreign competition, as those captains of the industry whose hands are guiding the wheels of commerce into the great future which awaits us!"

The salient features of the Association shone through all the discussions. Men from every province joined thought in their effort to promote progress through co-operation, and to break down all inter-provincial barriers which tend to separate still further the widely scattered parts of the Dominion. The stiff-

ing atmosphere of politics, the narrow platforms of provincialism and even the limited spheres of particular interests and industries were left behind for the discussion of national subjects from national standpoints by the nation's business men.

To these men, old Quebec threw open her gates, and extended her warmest welcome. Federal, provincial and civic authorities joined hands with the energetic business community of the city in welcoming the members of the Association. And what a delightful spot the old capital is! No Canadian knows his country or appreciates its history till he has seen Quebec. While it is still the old fortress, rich in historic association, it is a modern manufacturing centre, shipping its products to almost every part of the world.

The Convention will long be remembered as one of the most pleasant and profitable meetings ever held under the auspices of the Association, and, undoubtedly, the results flowing from it will be felt in every part of the Dominion.

THE MIXED CARLOAD QUESTION.

THE application of the Canadian Manufacturers' Association to the Board of Railway Commissioners for the restoration of Rule 2, Classification No. 11, relating to mixed carloads, has been unfortunate enough to meet with determined opposition from the Boards of Trade both in Winnipeg and Vancouver. That some opposition would develop was only to be expected, but from a careful study of the arguments advanced against the application, and from the attitude of the western press generally, it is only too apparent that by far the greater part of that opposition is due to a misconception as to the real issue at stake.

The question to be decided is not one as between the East and West. Those who have endeavored to switch the discussion into this channel have done so for the purpose of securing popular approval of a cause founded upon pure selfishness. The real issue is something altogether different, and hinges upon the point whether the railways are to be allowed to discriminate in favor of one manufacturer as against another, in favor of one commodity as against another, in favor of one locality as against another. Under the present classification they are doing so through their arbitrary regulations in the matter of mixed carloads. They are conceding to the varied products of one factory a mixed carload rate while they are refusing it to another. The manufacturer of stoves, who also makes stampedware, is allowed to mix his commodities in one car for shipment to the West, but another manufacturer of stoves, who happens to make scales instead of stampedware, is refused this privilege, even though his stoves and scales are made under the same roof and from the same materials, enjoy the same classification and are sold in the same shop. The wholesale grocer may consolidate into one shipment a mixed assortment

of churns, brooms, crockery and groceries and secure a carload rate, even though his goods are assembled from a hundred different factories and are made out of as many different materials, yet the manufacturer of those same churns, who also makes wooden pumps and washing machines, is denied the privilege of making up a mixed car from the products of his own factory.

The classification is full of inconsistencies like the above, and it is from this condition of affairs that the manufacturers desire to obtain relief. They have taken the ground that if a mixed carload rating, as a phase of the transportation problem, is theoretically sound, then it is right not for one but for all, and must be enjoyed by all. On the other hand if it is wrong in principle it is wrong for all, and must not be enjoyed in the form of a privilege by the favored few. To the rule that the shipment must be from one consignor to one consignee they take no exception, but they do maintain, and their view is supported by judicial decisions both in England and the United States, that provided this rule is complied with, the railways as common carriers must accept the shipment for transportation, irrespective as to whether the goods were bought, begged or borrowed.

Under the present classification, any number of commodities, each of which enjoys a carload rating, may be consolidated into one car for shipment to any point east of Port Arthur, provided the whole car bears the rate of the highest class commodity in that car. This rule, now restricted to points east of Port Arthur, was until two years ago in general operation throughout the West, where the relatively greater discrepancies between the carload and less than carload rates made the mixing privilege a matter of considerable value to the consumer. No one has ever dreamed of alleging that under it the wholesale interests of Manitoba or British Columbia suffered. On the contrary, from small beginnings, by availing themselves of the opportunity to buy in small lots, and to have those lots consolidated into one car for shipment, western jobbers have been able to build up large and successful businesses, until to-day their purchases are almost all made in carload quantities. Such a condition was a natural and healthy one. It afforded scope to the man of brains and energy, it encouraged competition in trade, and worked out to the benefit of the consumer. But the withdrawal of those privileges has resulted in squeezing out the small jobber, and in concentrating the entire business of the West in the hands of the very men whose initial success depended upon the existence of the regulations whose restoration they are now opposing.

As has already been stated, ignorance of the real facts underlying the situation, coupled with a natural disinclination to antagonize the influential jobbing interests of the West, will account in a large measure for the opposition of the rank and file, but ignorance of the facts cannot be alleged to condone the actions of men who have endeavored to perpetuate unnatural barriers to inter-provincial trade, who have endeavored to restrict free competition amongst the producers in this country, who have instigated a movement which is anti-national in character, and which savors of class legislation of the most vicious kind.

WHO PAYS THE COMMERCIAL TRAVELLER'S TAX?

THE Dominion Cabinet, acting under advice from the Minister of Justice, has declined to interfere in the matter of the commercial travellers' tax in British Columbia, upon the ground that the province was quite within its rights in enacting such legislation. This opinion appears to be concurred in by the best legal advice which interested parties have been able to secure, so that any further opposition on the constitutional feature of the case will have to be dropped, for the time being at least. But, even though such legislation may be strictly intra vires according to the letter of the British North America Act, no one will deny that it is a direct violation of the spirit of the Act, and if it is constitutional as the Act now reads, then the sooner it is made unconstitutional the better.

An opportunity to accomplish this object and to solve the question to the satisfaction of all concerned, will shortly be afforded the Dominion Government when the provinces press their respective suits for an increased subsidy. The granting of such applications should be made contingent upon the repeal of all legislation of an extra-provincial character. Prince Edward Island has frankly admitted that its motive in imposing a tax upon commercial travellers was to raise more revenue. In British Columbia, while there may have been other influences at work, the situation is very similar; they want more money and must have it. The granting of an increased subsidy therefore by the federal authorities would rob these provinces of the only reasonable excuse, they could offer in defence of their action, and the time would consequently appear an opportune one for enacting such legislation as would settle the unconstitutionality of these inter-provincial trade barriers for all time to come.

Perhaps the people of British Columbia and Prince Edward Island will be the more willing to accept this solution of the difficulty when they will have realized more fully than they do at present that it is themselves as individual consumers who are in reality paying this tax. Its immediate result is to restrict competition. Many a firm has already withdrawn its travellers from these provinces purely on account of the tax. The few who remain have a clearer field to work in. There is not the same eager rush to secure business, and consequently there is less shading of prices. The retailer is unable to drive as good a bargain as before, so he just adds a little more to his selling price, and ultimately it is the poor consumer who has to pay the piper.

This means of raising a revenue bids fair soon to become unpopular, and even though the Legislatures of these provinces have refused to be appealed to on broad national lines, we believe that a little education and a little experience will convince them of the folly of their present course, and that a proposition such as outlined above will be eagerly welcomed.

THE POSSIBILITIES OF OUR WEST.

TO the average Canadian who has followed the story of western development during the past ten years, it has no doubt long since become apparent that it is a useless expenditure of time and energy to attempt to form anything like an accurate estimate of the ultimate wheat crop of our North-West provinces. That is a problem which time alone can solve. For most of us it is sufficient to know that the crop for the present year will probably reach 100,000,000 bushels; that to produce that crop only the veriest fringe of land along the line of our railways has been brought under the plough; that beyond that fringe there are thousands upon thousands of square miles of fertile soil whose possibilities in the way of wheat production no man can foretell. To attempt to do so is mere speculation. Both the acreage and the average productivity are unknown quantities. Vast areas, once regarded as arid wastes unfit for cultivation, are to-day being reclaimed by means of irrigation canals, while the changing climatic conditions consequent upon the more general cultivation of the soil are year by year modifying the aspect of the situation.

The very diversity of opinion expressed by men who should be qualified to speak upon a question of this kind emphasizes the futility of any attempt to furnish a satisfactory answer to the problem. Dr. W. S. Saunders, Director of Experimental Farms, in a report prepared a little over a year ago, estimated that if only one-fourth of the land suitable for cultivation were devoted to wheat farming, the annual crop, at the average rate of the Manitoba yield for the previous ten years, would be 812,000,000 bushels. Mr. Hugh McKellar, Deputy Minister of Agriculture for Manitoba, with all the facilities at his disposal for enquiry and investigation along these lines, has computed the prospective annual yield at 1,050,000 bushels. One of the latest reports to be submitted is that prepared by Professor Mavor for the British Board of Trade, and issued by them in the form of a blue book.

The data upon which Professor Mavor has based his deductions is not set forth with as much clearness as one could wish, but the result of his calculations is that the ultimate crop will not exceed 247,000,000 bushels.

The tremendous disparity between this last report and either of the others is very suggestive. Professor Mavor is a man who has done much valuable work along the lines of economic research, and his opinions are therefore entitled to some consideration. On the other hand both Dr. Saunders and Mr. McKellar are men of wide experience and long acquaintance with wheat production in the West, and special value must necessarily attach to their statements.

It is needless to say that Professor Mavor's views are at utter variance with the views popularly held throughout Manitoba and the prairie section, and from a purely Canadian standpoint it must be regarded as unfortunate that his report should have appeared at the time and in the form it did. It will beyond a doubt negative temporarily the splendid efforts of our Immigration Department, and that, too, just at a time when the better class of settlers are beginning to be attracted to this country in fairly large numbers. But it seems safe to predict that its effect will only be temporary, for if Canada has the asset in her North-West provinces which all Canadians firmly believe she has, nothing can retard the forward movement which has been begun, and in the glorious progress of the next ten years the net result of any such pessimistic influences must necessarily appear very trifling.

In this connection, the selection of Winnipeg as the next place of annual meeting for the Canadian Manufacturers' Association is of peculiar significance. Only two years have elapsed since the manufacturers paid an official visit to the West. That visit was a great educator, and has been productive of great results. Scores of eastern houses have since then established distributing depots and branch factories in the section west of the Great Lakes, and a deep-seated feeling of confidence in the future of that country has developed among the mercantile classes of the East. The eyes of our business men are constantly turned towards the setting sun, and already they are preparing to go forth upon another expedition into the land of promise. Western optimism seems to have laid firm hold upon them, and all alike are proud to belong to a nation possessing within its borders the future granary of the Empire. In this sentiment the West will find a powerful ally when it becomes necessary to defend her claims to greatness, and no matter what pessimistic reports may be circulated abroad, she may rest assured that the solid men of this country are ever at her back.

THE NEW CAR SERVICE RULES.

ON another page of this issue will be found the full text of the new car service rules which have been drafted by representatives of the Canadian Car Service Association, the Canadian Pacific and Grand Trunk Railways and the Canadian Manufacturers' Association, and which only await the approval of the Board of Railway Commissioners before becoming operative throughout the whole of Canada.

Even to one of very limited experience in transportation matters, the superiority of the proposed rules over those at present in effect needs no pointing out. The provision which is made for a reasonable extension of time when cars have been "bunched" should remove one of the most fruitful causes of complaint against the imposition of demurrage charges. Only those who have suffered the annoyance of being compelled to maintain a staff of shippers or unloaders in idleness, perhaps for several days at a stretch, and then being penalized by the railway for failure to perform more work in a given time than they were physically capable of performing, can appreciate the importance and advantage of this particular regulation. Similarly the provision which is made for an extension of the free time allowance when loading or unloading becomes impracticable owing to wet or stormy weather should also be received with satisfaction by

the shipping public. Heretofore the agent has been allowed no discretion in matters of this kind, and the only course open to the shipper has been to pay the demurrage charges, to make application to the manager for a refund, and to trust to Providence to get his money back. The extra 24 hours time allowance in the case of cars loaded with coal, coke or lumber is but reasonable and just, considering the greatly increased carrying capacity of the cars now used in the transportation of commodities of that class, while the rule that the consignee is held to have been advised only at 7 a.m. of the day following the mailing of a notice should frequently save him from being mulcted.

Generally speaking, great care has been exercised to avoid ambiguous wordings in the new rules, and to define the shipper's privileges in clear and concise language which cannot be mistaken, a fact which of itself will do much to prevent friction and unpleasantness, and which will be doubly acceptable on that account.

In view of the fact that the conference, of which these rules are the result, was brought about by the Transportation Department of the Canadian Manufacturers' Association, every shipper in the country has reason to feel grateful to that department for the direct benefits which he will receive as a result of its labors. Practically every objection urged against the present rules on behalf of the Association has been conceded by the railways. The monetary value of these concessions, to say nothing of the inconvenience and annoyance done away with, is very considerable, and it is to be hoped that the shipping public will show their appreciation of the efforts put forth on their behalf by according to the Department its fullest co-operation and support.

We have received an announcement from a well-known Toronto-tailor, advertising his fall and winter suits and overcoats. The booklet was printed in Philadelphia, on United States paper, was mailed to the individual customers in Canada from the same place and prepaid with United States stamps, and was an advertisement to sell suits made from imported woollens. Apparently the only thing Canadian some people will consent to use is our money. It's good the world over.

Jamaican sugar producers are greatly exercised over the fact that the Canadian refiners pay them no more for their raw sugar than do the New York refiners, notwithstanding the preference of 33⅓ per cent. But why should they? It would be ridiculous to argue in favor of two prices for the same goods in the same market. Jamaica's advantage from the preference is the more ready sale she finds for her cane; Canada's advantage is the lower price her people pay for an article not produced in the country.

In Mr. J. S. Larke the Department of Trade and Commerce has an energetic, conscientious and efficient officer. His success in the Australian field has been quite pronounced, and he is deserving of the warmest thanks at the hands of our business community. But Mr. Larke has been seriously handicapped in his work. If the reports which reach us from travellers to that country are correct, his office accommodation is not what it should be; indeed, it is anything but a credit to Canadian enterprise. From third rate quarters on a back street our commercial interests can never be properly advanced. Let us get inviting offices on the front street, no matter what they cost. The best is none too good for Canada.

The Postmaster-General is to be commended for the steps he has taken to protect this country against the sensational rubbish and cheap advertising literature with which it is being flooded from Augusta, Me., and other centres. If the Minister of Customs will only go him one better by imposing a duty on the ten-cent magazine, which is more than half advertisements, he will earn the thanks of nearly every business man in Canada. There is too much money going out of this country to mail order houses in the United States. And there is too much Yankee jingoism circulated through our mails at the country's expense. Let the Canadian publication have a chance.



THE TARIFF COMMISSION

By WATSON GRIFFIN



THE Government has adopted the right course in deciding to make a thorough investigation into Canadian conditions before revising the tariff. The Canadian Manufacturers' Association asked for such an investigation several years ago. Some of our industries have been injured by the delay, but fortunately owing to the fact that the whole civilized world has been passing through a period of extraordinary prosperity, foreign competition has not been so disastrous to Canadian industries as it would otherwise have been, and if the right kind of tariff revision is made at the next session it will be in time to save great loss to Canadian manufacturers and consequent injury to Canadian workmen, Canadian farmers, and the people in general. But every manufacturer should realize that the Government's decision will largely depend upon the evidence placed before the commission. No manufacturer who desires tariff revision can afford to neglect this opportunity. Every manufacturer should take an active interest in the matter. Even those manufacturers who have themselves sufficient protection should co-operate to secure for others what they themselves enjoy, and in doing so, they will help themselves as well as others, for every successful industry contributes to the general prosperity of the country. The farmers, too, should insist upon having higher protection for their products. The protection for farm products probably averages higher now than the protection for manufactured products, but in many cases the Canadian duties on American farm products are very much lower than the American duties on Canadian farm products. Last year on the average, one Canadian consumed more United States farm products than thirty-four Americans did of Canadian farm products of the same kind. This is not because Canadian farms or Canadian farmers are inferior to those of the United States, but because the farmers of the United States have insisted upon having adequate protection for their products. Canadian farmers must follow their example and demand a higher tariff.

There is reason to believe that the Government honestly desire to do justice to Canadian manufacturers as well as to Canadian farmers, and the probability is that the tariff adopted at the next session of Parliament will be more thoroughly protective than any hitherto enacted in Canada. The intention of the Government has already been announced by the Finance Minister. There are to be three tariffs to be known respectively as the maximum, the minimum and the preferential. The preferential tariff which will apply only to goods imported from British countries, will actually be the minimum tariff, and it might be wise to adopt some other name for the medium tariff. However, the name is not of very great importance. The probability is that the maximum tariff will approximate very closely to that of the United States. It may be hoped that the so-called "minimum" tariff will average somewhat higher than the present general tariff.

True protectionists would prefer a tariff system not based on the principle of retaliation and reciprocity, but, perhaps after the maximum tariff has been in force a short time its efficacy in causing the establishment and development of Canadian industries will be so clearly manifest to all sections of the people that the Government will eliminate the so-called "minimum" tariff altogether, retaining the maximum tariff with the British preference, no matter what action the United States Congress and other foreign legislatures may take in the direction of reciprocity of tariffs. It must be remembered that the industries of the United States have had protection since the year 1824. Canadian industries have been protected for a comparatively short period. The manufacturers of the United States could afford to have their protection reduced in order to maintain their present privileges in the rapidly developing market of Canada, but Canadian industries must have a long period of high protection before they can meet American competition on equal grounds.

In any case we may hope that our Government will make it plain that our minimum tariff is not a standing offer of reciprocity, but is liable to be changed whenever the needs of the country may require it, irrespective of the action of other nations. What we want is not a tariff for retaliation, but one based entirely on the needs of Canada and administered in that spirit.

The Increased British Preference.

The immediate effect of the triple tariff system will be to increase the British preference by increasing the tariff against foreign countries having high tariffs and this feature will be generally regarded with favor, but, unfortunately, it will limit the power to give a permanent increase in the preference without destroying Canadian industries, for if any nation subject to the maximum tariff lowers its own tariff sufficiently to be entitled to the benefits of the minimum tariff, a great part of the British preference must be withdrawn. For instance, if the United States Congress should also adopt a maximum and minimum tariff, our Government might suddenly be called upon to abolish the maximum tariff on United States goods, thus reducing the preference on British goods, and at the same time exposing Canadian industries to keen American competition. In establishing the triple tariff our Government will practically place it in the power of the United States Congress, not only to limit the amount of protection Canadian manufacturers may have, but also to limit the preference to British goods. Fortunately for Canada, both political parties now recognize that popular opinion is opposed to "unrestricted reciprocity" with the United States. It should be equally apparent to them that Canadians in general are not in favor of a policy of "restricted reciprocity." The trend of sentiment throughout Canada is towards closer trade relations with countries of the British Empire. What the people want is a policy which while developing our own resources and building up home industries, will divert our external trade from foreign into British channels. Perhaps, however, Mr. Fielding may introduce the triple tariff with the announcement that the so-called "minimum" or medium tariff may be abolished at any time if it is found to hamper the promotion of trade with British countries or whenever Britain is ready to give Canada an adequate reciprocal preference.

The National Reciprocity Conference.

The National Reciprocity Conference held at Chicago recently adopted resolutions in favor of a dual tariff system. They propose that the McKinley Tariff should be retained as the maximum, while a minimum tariff should be imposed on imports from other countries having moderate duties on United States goods.

The American Economist severely criticises the proposal that the United States should adopt a system of maximum and minimum tariffs similar to that proposed by the Canadian Government. *The Economist* says: "This plan involves two sets of tariff schedules. Its fulfilment would necessitate the passage by Congress of a general law placing in the discretion of the Executive the power of granting tariff concessions to nations favoring the exports of the United States and of imposing tariff penalties, in the shape of increased rates of duty, upon nations failing to favor the products of the United States with their minimum tariff rates. This would mean two tariffs in operation at the same time. This would also involve the partial surrender by Congress of its tariff-making powers. Congress could fix the minimum, but would have no control over the maximum tariff. It would amount to a radical, almost revolutionary departure from the system of tariff making and tariff administration that has prevailed since the foundation of our Government. Can stability of tariff rates be maintained along with the dual tariff

system? This is the question which seriously concerns the business and producing interests. Whatever tariff may be adopted by Congress, that tariff should be fixed, stable and certain. Productive industry would require this as a condition indispensable. Tariff stability becomes impossible when we are operating upon the basis of rates which may at any time under certain conditions be reduced. The very essence of a maximum and minimum tariff must, of necessity, be irregularity and instability. The tariff rate of to-day may not, probably will not, be the tariff rate of one month or one year hence. Production cannot thrive under such an unstable system."

Probably very few Canadian protectionists would endorse the principle of making our tariff thus subject to the legislation of other countries, but, nevertheless, the proposal of the Government is generally welcomed by manufacturers, because they believe that the so-called "minimum" or medium tariff under the new arrangement will be at least as high as the present tariff, and that the maximum tariff will immediately give additional protection, and at the same time, increase the preference for British goods. They recognize that the Government is endeavoring in its own way to respond to the strong popular sentiment in favor of adequate protection for Canadian industries that has been developed within the last few years and they hope that the same popular sentiment which brings about the adoption of the high tariff, will cause the Government to retain it, even if the United States and other foreign countries should offer reciprocity. It is very important, however, that manufacturers should insist that the "minimum" tariff against foreign countries should be at least as high as the present general tariff. If the adoption of a high "maximum" tariff were accompanied by a reduction of the present general tariff in framing the minimum schedules, it might prove injurious instead of beneficial to Canadian industries.

Danger of Complications.

There is one objection to the triple system that is worthy of consideration by the Government. No two foreign countries have exactly the same tariffs. Consequently the minimum tariff cannot go into effect automatically. The Government will have to decide in each case what countries are entitled to enjoy the benefits of the low rate. This may lead to charges of unfair discrimination. It is worthy of note that with the exception of Germany, the world at large has acknowledged the right of Canada to give a preference to the countries of the Empire. The adoption of this preference caused absolutely no ill-feeling in the United States and no threats of retaliation. It is not so certain that the Americans would receive with equal good humor a discrimination in favor of other foreign countries.

It is possible that the Government may abandon the idea of a triple tariff after the investigation now in progress is complete. It is probable that Mr. Fielding's proposal made two years ago was merely intended as a suggestion for the consideration of the Canadian people. If he makes careful inquiry he will find that the majority of those who have commended the proposal are of the opinion that having once imposed the maximum tariff the Government will find public opinion so strong in favor of making it permanent that it will be necessary to withdraw the minimum tariff on foreign products. This being the case, would it not be wiser for Mr. Fielding to boldly announce a change of opinion regarding the triple tariff, and make the maximum tariff, (approximating to that of the United States) apply at once to imports from all foreign countries? Such an arrangement would be received with almost universal satisfaction in Canada and the increased preference given to British goods would mightily please the Mother Country. The retention of a low tariff on British goods would satisfy low tariff advocates as it would ensure outside competition. Such a dual tariff could be much more easily administered than a triple tariff. It would cause less annoyance to customs officials, offer fewer opportunities for fraud and be more satisfactory to honest importers as well as to Canadian manufacturers.

The Coal Duties.

The *Sydney Record* complains that Ontario manufacturers are sensibly demanding that coal be placed on the free list. The fact is that while the great majority of Ontario manufacturers probably believe that the abolition of the duty on coal in both Canada and the United States would be beneficial to them if it did not hurt any other Canadians, there is no Ontario agitation for free coal because the general feeling is that so long as the coal producers of Nova Scotia believe that reciprocity in coal would be injurious to them they should have the sympathy and support of all good Canadians when they ask the Government to give adequate protection to Nova Scotia's chief industry.

The agitation for free coal seems to be a one man movement, the agitator being a certain W. C. Milner, who is writing to newspapers throughout the country in advocacy of his views. Mr. Milner certainly does not represent the manufacturers of Ontario, and both the mine operators and miners of Nova Scotia are opposed to his proposals.

The only reciprocal arrangement that could be entertained by the Nova Scotia coal producers, would be one binding upon both countries for a very long period, not less than fifty years. Under any other arrangement the business of the mining companies would be liable to sudden demoralization. Hon. Clifford Sifton well expressed the feelings of Canadians in general when he said:—

"We could not afford to risk much on a market that might be hastily closed to us. Canadians have not forgotten the lesson of 1866, when Washington abrogated the reciprocity treaty of 1854. This country had got into the way of adapting its production, and very largely its entire business, to the American market. Canada was flattened out for years by the abrogation of the treaty. No more of that for me. We have adapted our production and business to the independent self-sufficient policy that has been pursued for many years now. Does anybody of good sense imagine that we will give that up, and undertake a re-adaptation to the United States market on a bargain extending over any short term, or which could be done away with by a few years' notice from Washington? No."

But it is by no means certain that even a long term treaty of reciprocity would be to the advantage of either the Nova Scotia producers or the Ontario consumers. It is admitted that Nova Scotia coal could not find any market in the United States beyond the boundaries of New England, and that even there, it would be subject to sharp competition from the mines of the United States. The New England States have only an area of 62,005 square miles with very little good agricultural land and no valuable minerals, while the timber lands are being rapidly exhausted. Their situation is not particularly favorable for trade with the United States at large, and there is no reason to believe that there will be any great growth of manufactures or population in the future. But the Province of Quebec has an area of 351,873 square miles, more than five times as great as the New England States. It has great areas of fertile farm lands, immense forests of valuable timber, rich mineral resources and wonderful water powers, while it is very favorably situated for trade with the great North-West and the Dominion at large. Its consumption of coal is certain to be vastly greater than that of the New England States. Every new factory in the Province of Quebec creates an additional demand for Nova Scotia coal.

There is reason to believe that the enlargement of the St. Lawrence canal system recently completed will make it profitable to carry Nova Scotia coal to Ontario, and a still further enlargement is a possibility of the future. In any case, it is almost certain that the Canadian Government will, in the not distant future, construct a canal system connecting the Georgian Bay with the Ottawa River, allowing boats drawing 20 feet of water to pass from Nova Scotia to any port on the upper lakes without breaking bulk. Eminent engineers have estimated that such a canal system could be constructed for \$75,000,000 and the present

revenue from coal duties would pay the interest on that amount. The cost of the canal may somewhat exceed the estimate of the engineers, but as it would shorten the water distance between the West and the East by over 400 miles and bring Montreal as close to Fort William, Port Arthur, Chicago and Duluth as Buffalo now is, it would completely revolutionize transportation conditions and the cost would soon be returned to the people in cheaper freight rates. Taking these facts into consideration, will it not be wiser for the coal producers of Nova Scotia to devote their attention to extending their trade in the vast and rapidly developing Provinces of Quebec and Ontario, than to place their dependence upon the New England States which must be comparatively stagnant?

It has been suggested that if the revenue derived from the duty on coal imported into Ontario were devoted to bounties for boats carrying coal to Ontario from Nova Scotia it might have a greater effect in cheapening coal to Ontario consumers than the abolition of the duty as it would bring Nova Scotia coal into competition with American coal, whereas the abolition of the duty would give the United States coal mines the complete monopoly of the Ontario market. Of course as Nova Scotia coal displaced United States coal in the Ontario market the revenue derived from the duty would gradually decrease, but in the meantime a trade would be developed which would probably be profitable without bounties. Moreover, the Ontario demand for coal is increasing every year and even without any great reduction in the amount of imports a considerable market might be found for Nova Scotia coal.

Reciprocity in coal would undoubtedly be in the interest of the New England States. It would give the manufacturers of those states competition, but it would not have the same effect in Ontario. On the contrary it would put an end to all hope of Nova Scotia coal coming into competition with United States coal in this province.

One point worthy of consideration by Ontario manufacturers is this. If Nova Scotia coal finds its market in the New England States instead of in Quebec and Ontario, it will be to the interest of the Nova Scotia coal producers to get return cargoes for their boats in the New England States, for the cost of transportation will be twice as great if the boats return empty. On the other hand if boats come from Nova Scotia with coal for Ontario, they will take back western products as return cargoes. In this way mutually advantageous inter-provincial trade may be developed.

MANITOBA BRANCH.

Annual Meeting Presages a Year of Great Activity.

THE annual meeting of the Manitoba Branch of the Canadian Manufacturers' Association was held in the rooms of the Builders' Exchange, Winnipeg, on Friday, September 8th at 8 p.m. Considering the strength of the local branch there was a splendid attendance, the representatives of our twenty firms being present when Chairman Geo. F. Bryan called the meeting to order.

Mr. Bryan opened the proceedings with an address in which he reviewed the work of the branch during the past year. He referred with pride to the important position now occupied by the Association among the commercial organizations of Canada, and emphasized the growing field of usefulness which was being opened up for the Manitoba Branch.

After the minutes of the previous meeting had been read and adopted, the Secretary, Mr. W. J. Bulman, read the following communications:—

1. From Mr. J. O. Thorn, respecting the placing of letter boxes at the C. P. R. depot, from which mail might be cleared five minutes before the departure of each train.

2. From Mr. R. J. Younge, inviting the opinion of the branch

on the extension of the mixed carload privilege to points west of Port Arthur, also calling attention to the fact that United States stone was to be used in the new Winnipeg Post Office, and urging that steps be taken to have the specifications amended so as to prohibit the use of foreign material.

3. From Sir William Mulock, asking the views of the branch in the matter of government control of telegraph and telephone services.

It was decided to refer all these matters to the incoming executive for action.

Mr. Bulman then presented the Secretary's Annual Report, which, notwithstanding the adverse conditions he had had to contend with, was a very satisfactory one. The membership had increased by fifty per cent. A great deal of interest had been aroused among local manufacturers in regard to the present business tax and the electric power situation. Valuable statistics and other data had been collected on both these subjects, and the branch would be asked in the near future to take such action as would adequately protect local manufacturing interests.

The Chairman then called upon Mr. G. M. Murray, Editor of INDUSTRIAL CANADA, to address the meeting. Mr. Murray's remarks took the form of a brief review of the work conducted through the head office of the Association during the year just closed, including the inauguration of the Insurance Department, the prosecution of the campaign in favor of a general tariff revision, the various items of legislation in which the Association had interested itself, and the successful carrying out of an excursion to Great Britain. On behalf of the general officers of the Association he extended a most cordial invitation to all present to attend the Annual Convention at Quebec. He had been led to believe that an invitation would be extended to the Association by the Winnipeg members to hold its 1906 Convention in their city. If such was their intention he urged them to send as strong a deputation to Quebec as possible, assuring the meeting that their invitation would be most favorably considered.

After some little discussion it was moved by Mr. E. L. Drewry, and seconded by Mr. E. F. Hutchings, that an invitation be sent to the Canadian Manufacturers' Association in Convention assembled to hold their next annual meeting in the city of Winnipeg. The motion was carried unanimously amid great applause, and Mr. Drewry and Capt. Hugh C. MacLean were subsequently appointed to present the invitation on behalf of the Winnipeg members.

Following the election of officers, an address was delivered by Mr. J. R. Marlow, Manager of the Association's Transportation Department. Mr. Marlow's remarks were listened to with the keenest interest by all present. He took advantage of the opportunity to acquaint the local branch with the action which the Association had taken upon all important transportation matters since the inauguration of the department. He touched at considerable length upon the many results achieved, and elaborated with more or less detail the attitude which the Association had instructed him to take in regard to the extension of the mixed carload privileges, the improvement of the rules governing car service and demurrage, the reduction of the minimum charges on smalls, the definition of owner's risk, and other questions then before the Board of Railway Commissioners. In concluding, Mr. Marlow expressed his willingness to answer any questions that might be put by members desiring further information upon any of the matters referred to. Considerable time was taken up in answering the various points raised, and the meeting dispersed at a late hour, after a hearty vote of thanks had been tendered to Mr. Murray and Mr. Marlow for their interesting addresses.

The election of officers resulted as follows: Vice-President for Manitoba, L. C. Macintyre; Chairman, E. L. Drewry; Vice-Chairman, Thos. R. Deacon; Secretary, W. J. Bulman; Representatives on the Executive Council, Geo. F. Bryan and E. F. Hutchings; Executive Committee, Messrs. Dyson, Hood, Wildman, Martin, Hammond, McKechnie, Blackwood, Stephens, Patterson and Armington.



QUEBEC (FROM LEVIS).

The Quebec Convention.

Full Report of the Annual General Meeting, Canadian Manufacturers' Association, 1905.

ANOTHER milestone has been passed in the onward career of the Canadian Manufacturers' Association, and another year of splendid achievement has been written down to its credit in the annals of Canadian industry.

The three days' convention, held in the city of Quebec, on September 18th, 19th and 20th, will ever be regarded as one of the most memorable in the history of the organization. The visiting delegates, while not perhaps so numerous as on some former occasions, were thoroughly representative of the various industries and localities embraced in the Association, and their common enthusiasm for the promotion of national Canadian interests was the pivot upon which all their deliberations swung.

Despite the volume of business transacted and the multiplicity of detail to be attended to, everything passed off with the smoothness and regularity that come only from perfect organization. In the wonderful record of results achieved, as shown in the reports of the different committees, in the variety and importance of the topics introduced for discussion and upon which action was taken, in the genial good fellowship which permeated the whole proceedings, and last, but not least, in the princely hospitality which was showered upon the visitors by their brother manufacturers of Quebec, in all of these respects the Convention of 1905 has never been surpassed.

Through the courtesy of the Mayor and Aldermen, the meetings were held in the Council Chamber of the City Hall, office accommodation for Secretary's staff, also being provided in the same building. The rain, which unfortunately fell almost incessantly throughout the three days of the convention, in no way dampened the ardor of the little army of delegates, and the hour appointed always found a goodly attendance of enthusiastic members.

The first business session of the Convention was scheduled to begin at 2.30 p.m. on Monday, Sept. 18th. The spacious council chamber in the City Hall was well filled when President W. K. George took the chair and called the meeting to order. Upon rising to speak he was greeted with a spontaneous outburst of applause, after gracefully acknowledging which, he said:

Gentlemen, we will proceed directly with the business before us. We will dispense with anything in the way of speech making at this business session as there will be more or less of that at a later time. I think, however, it is right and proper that at the first session of our Convention we should express in a public way our thanks to the City of Quebec and to the Mayor and Officials for their kindness to us and the way in which they have given us every accommodation in the city buildings.

I would also like to impress upon you the necessity of starting these meetings as promptly at the specified time as it is possible for us to do. We would like to have a full and frank discussion of every report brought up, and to do that it will necessitate a considerable amount of time. Therefore, I would ask you

all kindly to be here at the hour specified for the opening of the meetings.

The first item on to-day's agenda is the minutes of the last annual meeting. What do you wish done with those?

(Voices) Taken as read.

THE PRESIDENT:—The resolutions have, as you know, been before the Resolution Committee which is composed of the Convention Arrangements Committee, that being made up of the officers and chairmen of all the different committees. These resolutions I think should have been in before the 12th of September, but if any one has any other resolutions which he wishes to bring before the Convention we would be glad to have them presented, so that they can be taken up and incorporated in the committee's report.

I will call upon the Secretary, Mr. Younge, to read some communications.

The Secretary read communications extending invitations and privileges from Mr. J. F. Turnbull, President of the Garrison Club, and from the General Secretary of the Y.M.C.A., which were received with applause.

THE PRESIDENT:—Gentlemen, I suppose all we can do with these at present is to receive them with thanks and acknowledge them in the usual way. We will instruct the Secretary to do that, with your approval.

The first report which we have before us is that of the Treasurer. It is absolutely unnecessary to introduce Mr. Booth to the members of this Association. I will, therefore, call on Mr. Booth to present his report. (Applause).

Mr. Booth then presented the Treasurer's statement as follows:

THE TREASURER'S REPORT.

To the Members, Canadian Manufacturers' Association:

GENTLEMEN,—I beg to present herewith the Financial Statement of the Association for the year ending July 31, 1905. The statement has been marked "audited and found correct" by Mr. W. C. Eddis, F.C.A., the Auditor appointed by you at the last annual meeting.

BALANCE SHEET.

As on the 31st July, 1905.

LIABILITIES.

Fees paid in advance and unearned.....	\$4,706 64
Accounts payable—	
Account Industrial Canada.....	\$966 07
Account Great Britain Excursion.....	661 93
Account Trade Index, 1905.....	161 65
Account Expense, etc.	306 64
	<hr/>
	2,096 29
Balance Surplus Assets.....	4,742 83
	<hr/>
	\$11,545 76

ASSETS.

Fees owing, accrued due.....	\$904 59
Furniture and Fittings—	
Toronto.....	\$1,290 65
Transportation Department.....	247 00
Montreal.....	649 85
Insurance Department.....	328 57
	<hr/>
	\$2,516 07
Less depreciation.....	225 28
	<hr/>
	2,290 79
Stationery, etc.....	368 73
Advertisements accruing due 31st July, 1905, and owing.....	\$3,451 89
Disbursements, account Penfold & Co., Adelaide.....	176 03
Accounts due, Insurance Department.....	387 73
	<hr/>
	\$4,015 65
Less reserve for bad and doubtful debts....	750 00
	<hr/>
	3,265 65
Trade Index, 1905.....	439 11
Petty cash.....	25 00
Bank balance.....	4,251 89
	<hr/>
	4,276 89
	<hr/>
	\$11,545 76

CASH ACCOUNT.

July, 1904-5.

RECEIPTS.

Balance July 31st, 1904.....	\$4,816 38
Membership fees.....	\$21,958 00
Industrial Canada.....	9,091 05
Dominion Exhibition.....	3,010 92
British Excursion.....	2,000 00
Insurance Department.....	1,711 56
Bank interest.....	190 92
Translations.....	43 81
Trade Index.....	160 00
London banquet.....	123 82
Educational campaign.....	7 63
Commercial reports.....	66 50
Expense account.....	330 15
	<hr/>
	38,694 36
	<hr/>
	\$43,510 74

EXPENDITURE.

Industrial Canada.....	\$11,020 34
Dominion Exhibition.....	2,568 53
Newfoundland Excursion.....	1,128 40
Insurance Department.....	2,896 61
Great Britain Excursion.....	609 37
Annual Meeting.....	803 44
Insurance Committee.....	236 48
Furniture and fittings.....	170 60
Receptions.....	207 80
London banquet.....	156 31
Account, Penfold & Co., Adelaide.....	176 03
Threshing machine section.....	17 40
Jewellery section.....	3 00
Cotton Section.....	11.35
Hat section.....	28 00
Cement section.....	5 40
Woollen section.....	21 60
Legal expenses.....	75 50
Trade Index, 1903.....	243 45

Trade Index, 1905.....	258 05
Commercial reports.....	54 14
Translations.....	32 66
Advertising.....	43 40
Membership fees.....	55 00
Express.....	19 02
Postage.....	1,624 49
Printing and stationery.....	1,017 79
Rent and light.....	765 84
Salaries.....	5,691 02
Telegraph and telephone.....	217 22
Travelling expenses.....	577 63
Exchange.....	143 45
Commissions.....	78 00
Certificates.....	270 38
Transportation.....	3,690 31
Sundries.....	335 28
Toronto Branch.....	557 25
Montreal Branch.....	2,584 63
British Columbia Branch.....	252 78
Nova Scotia Branch.....	320 86
Quebec Branch.....	192 14
Manitoba Branch.....	97 90
	<hr/>
	\$39,258 85

Cash on hand July 31, 1905.....

4,251 89

\$43,510 74

REVENUE ACCOUNT.

12 Months ending 31st July, 1905.

To Canadian Trade Index, 1903.....	\$271 45
" Newfoundland Excursion, 1904.....	1,128 40
" Receptions.....	202 85
" Woollen section.....	21 60
" Threshing machine section.....	18 00
" Jewellers' section.....	3 00
" Cotton section.....	11 35
" Hat section.....	28 00
" Cement section.....	5 40
" Annual Meeting.....	801 44
" Expense (as per Schedule A).....	17,719 62
" Industrial Canada (as per Schedule B).....	11,907 81
" Furniture and fittings.....	203 00
" Advertising.....	127 53
" London banquet.....	32 49
" Legal account.....	75 50
" Insurance Committee.....	238 98
" Insurance Dept. (as per Schedule C).....	2,108 88
" Provision for bad and doubtful debts..	150 00
By Membership fees.....	\$20,394 25
" Commercial reports.....	15 41
" Translations.....	70
" Interest.....	190 92
" Great Britain Excursion.....	728 70
" Dominion Exhibition, Winnipeg.....	21 04
" Industrial Canada (as per Schedule B).....	10,839 96
" Insurance Dept. (as per Schedule C).....	1,545 44

July 31, 1904.

" Balance.....

6,061 71

July 31, 1905.

" Balance.....

4,742 83

\$39,798 13 \$39,798 13

July 31, 1905.

" Balance.....

\$4,742 83

SCHEDULE A.

EXPENSE SUMMARY.

Express.	\$11 43
Postage.	1,153 75
Printing and stationery.	1,058 06
Rent and Light	714 34
Salaries.	6,032 52
Telegraph and telephones	181 77
Travelling expenses.	627 63
Exchange.	142 35
Commission	78 00
Certificates.	230 38
Transportation.	3,659 76
Sundries.	269 53
Toronto Branch.	397 54
Montreal Branch.	2,566 83
British Columbia Branch.	15 28
Nova Scotia Branch.	290 41
Quebec Branch.	192 14
Manitoba Branch.	97 90
	<hr/>
	\$17,719 62

SCHEDULE B.

INDUSTRIAL CANADA.

EXPENDITURE.

Printing, etc.	\$5,116 03
Paper	2,187 38
Salaries	1,168 65
Postage & Expenses of Distribu- tion	626 55
Commissions	2,151 31
Electros	416 27
Travelling Expenses	28 55
Special Literary Matter	170 03
Sundries	43 04

RECEIPTS.

Advertising Display	8,560 83	
“ Cards	985 81	9,546 64
Copies, Sale of		1,060 93
Inventory Staty. etc.		232 39
Revenue Account		1,067 85
	<hr/>	<hr/>
	11,907 81	11,907 81

SCHEDULE C.

INSURANCE DEPARTMENT.

To Salaries	1,346 99	
“ Travelling Expenses	288 65	
“ Printing, Stationery and Supplies	207 00	
“ Rent and Light	94 81	
“ Postage, Telegrams, Express etc.	91 12	
“ Subscriptions to Associations and Papers	31 45	
“ Maps	5.00	
“ Sundries	43 86	
By Fees etc. Received and Earned		1,545 44
“ Revenue Account		563 44
	<hr/>	<hr/>
	2,108 88	2,108 88

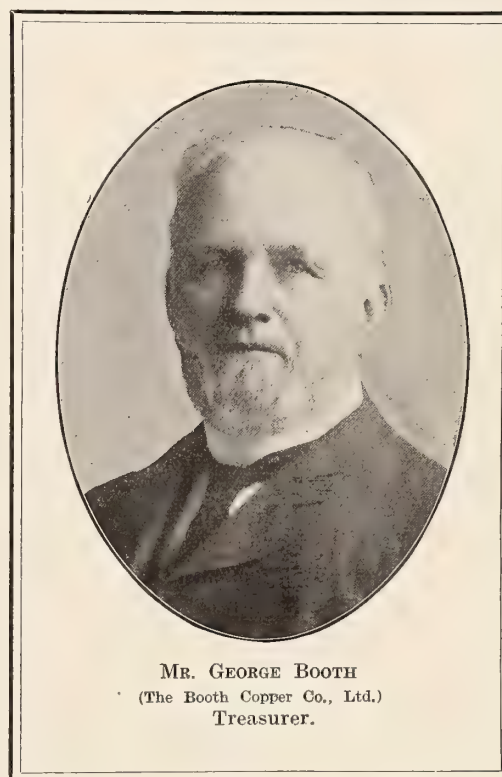
In presenting this report I may say that perhaps there is no one thing that points more strongly to the progress of the Canadian Manufacturers' Association than the increase in the cash receipts and expenditures, as submitted to you from year to year.

The receipts for the year just closed amount to the sum of \$38,694.36, and the expenditure to \$39,258.85. These figures are far in excess of those for any former year, and go to show that while the amount received has been unusually large the demands upon us have even exceeded our receipts.

It is believed that on a careful perusal of the statements herewith submitted, you will approve of the management of your Finance Committee, as nothing has been expended except that called for in the interests of the Association.

Industrial Canada.

The first item of expenditure calling for notice is that appertaining to INDUSTRIAL CANADA. This periodical is not published with a view to financial profit, but for the general benefit of our members—for the placing before them of useful information bearing on the manufacturing interests, together with a monthly statement of the action and workings of the Association through its various Departments and Committees. Although during the present year it has been found necessary to advance the large sum of \$1,929.29 over and above the cash receipts, yet on examination of the statement herewith it will be seen that there is



only a deficit for the year of \$1,067.55. When it is taken into consideration that this paper ranks among the best periodicals of its class, and is supplied to our members, now nearly 2,000 in number, gratis, we should feel gratified with the results.

Insurance Department.

The expenditure under this heading of \$2,896.61, with receipts of \$1,711.56, shows an apparent deficit of \$1,185.05. I am glad to say that this apparent deficit is only temporary, as from the information secured from the Insurance Department, we may expect that the Department will not only fulfil its promise to be self-sustaining, but it is quite possible that it may, in the future, be a revenue producer. The revenue statement of this Department shows a deficit to date of \$563.44, which together with preliminary expenses, \$238.98, amounting in all to \$802.42, will stand to the debit of the Department.

Other Items.

The item of \$243.45, "Trade Index 1903," is for an account that was left over from last year, and is well covered with the handsome balance derived from this issue. The other amount, \$258.05, for Trade Index 1905, is an advance made on account of the Index now in course of publication, and will doubtless be returned with good interest.

General Remarks.

While our income has been yearly increasing our expenditure has more than kept pace with it; but it has been the policy of your Finance Committee to keep our regular expenses within the amount of our annual revenue from Membership Fees, thus keeping the amounts received from other sources intact, in order that they may be used (if approved of by the Association) as a nucleus for a rest fund. It is thought that it might be prudent to make provision in this way for future contingencies that may arise. If the adoption of this course has your approval, the time and manner of carrying it out can be determined when the Association sees fit.

Increased Revenue Necessary.

Another matter that has received consideration is the necessity for increasing our revenue. Increases are being made from time to time by the enrolment of new members. The increase in membership during the past year has been very gratifying, and it is hoped that during the current year members will make this a personal matter so that the results may show even a larger augmentation.

It has been thought that the benefits derived from membership in this Association are of such value that we could justly advance the minimum fee of \$10 for ordinary membership. As we have over fifteen hundred ordinary members, a comparatively small advance would secure a considerable increase. While I do not feel warranted in advising this course, I would like to have an expression of opinion regarding this matter. If it would result in reducing our numbers, personally, I would not advocate it, as I think it unwise to weaken the influence we have through our wide membership, even should the result be an increase in our funds. The matter requires careful deliberation, and I have thought the Association might consider it in an advisory manner for the benefit of the incoming Board.

In conclusion, I believe that when considering the wide scope of the work which we have carried on, the Association has reason for gratification at the present very satisfactory state of the finances, and I wish to extend to all the members the hearty thanks of the Association for their continued support.

Respectfully submitted,

GEO. BOOTH,
Treasurer.

MR. BOOTH:—Since writing this report I have been looking into the standing of INDUSTRIAL CANADA for the last five years. I find for the first year our loss was \$423.41, the second year a profit of \$633.10, the third year \$954.43, the fourth year a loss of \$102.39, and the last year \$1,067 of a loss, with a total loss to date of only \$5.12, so that as has been said before many times INDUSTRIAL CANADA is really self-sustaining. The abnormal increase this year will be explained to you when you get a report on INDUSTRIAL CANADA, but a very large portion arose from the splendid number we made for the Great Britain Excursion.

I wish to say, Gentlemen, in referring to the balance sheet which is perfectly correct, the item of \$4,706.00 having been paid in advance, to our debit, that notwithstanding this we have the money and we have to start this year \$4,251.89 in the bank, with cash on hand \$25.00, making a total of \$4,276.89; membership fees owing \$904.59, \$400.00 of which has been paid since this statement was made up; this together with other items gives a surplus of \$6,309.93, which is at our or your disposal. (Applause).

If there are any questions I can answer I shall be pleased to do so, if not I am pleased to move the adoption of the report.

MR. E. G. HENDERSON:—The Insurance Department, schedule

C, shows a debit of \$563.44. The Treasurer in his report said there was a deficit of \$1,185.05.

The Treasurer's explanation of this apparent discrepancy was that one was a statement of receipts and disbursements, whereas the other represented the actual standing of the Department, including all assets and liabilities.

Increasing the Fees.

THE PRESIDENT:—Is there any other point any other gentleman would like to have made clear?

MR. BOOTH:—What about the advancing of the fees?

THE PRESIDENT:—You heard what the Treasurer suggested for your consideration in reference to increasing the revenue. He states: "It has been thought the benefits derived from membership in this Association are of such value that we could justly advance the minimum fee of \$10 for ordinary membership. As we have over 1,500 ordinary members, a comparatively small advance would secure a considerable increase." I would like it indeed if some of the members here would express an opinion in reference to that question.

MR. P. H. BURTON:—I understand that INDUSTRIAL CANADA is circulated free.

THE PRESIDENT:—Yes.

MR. BURTON:—Why not charge a dollar or two a year for INDUSTRIAL CANADA?

MR. BOOTH:—I think that would be rather a bad policy. We have been soliciting membership on the understanding that this was given to them free. I think it would be better to advance the fee.

MR. C. C. BALLANTYNE:—I would be in favor of increasing the ordinary membership fee from \$10 to \$15, leaving the fee for those who employ one hundred or more hands as it now stands at \$25 a year. I think \$10 a year is really too small a fee when you consider the benefit all the members derive from such an organization as this.

MR. JOHN PIGGOTT:—The previous speaker spoke of the advisability of increasing the fee. I think it would be a mistake. There is great strength in numbers. Numbers count very materially, but our numbers are comparatively small. Now, there are manufacturers here and employers of labor—I presume we all are more or less employers of labor—and we have a serious struggle coming before us. Labor is more thoroughly organized than we are, and they count very materially through their great numbers. Why not copy from their organization? Take any other institution, through the extension of a system of branch offices the more numerous and stronger it becomes. If you increase the fee it will increase the tendency to keep the smaller institution away. I do not agree with the previous speaker upon this point. He says, allow those members that have 100 or more employees to remain as they are in the matter of fees. I believe it is only right and equitable that it should be on a sliding scale; the more the manufacturer employs the more interested he is in the work that is transacted here, and the more benefit he should derive.

MR. GEO. E. AMYOT:—Mr. Chairman, I think the idea of increasing the fee of this Association is a good one, providing it has been well thought out and is not going to reduce the numbers. It is evident that this Association can not remain in statu quo, and judging from the increase in numbers for the past few years it is evident that the expenses have got to increase too. The members are looking towards the Association to give better work and do something more practical and profitable. Within the last two or three years the Association has established several departments. For instance, the Transportation Department; that is costing a lot of money to the Association. Then they have almost organized a Bureau in Ottawa to look after bills that are being put up before the Government, and while it has also shown very good results, it too has cost the Association a considerable sum. Then there is the Insurance Department; that also cannot be attended to without cost to the Association, and the money has got to come from somewhere.

Of course the only revenue we have comes from the members of the Association. They will have to allow themselves to be drawn on, as lightly as possible, but still they will have to be drawn on. I do not know to what extent you have studied this idea. It has evidently been in the head of the Executive Council for some time, and if you think it is not going to reduce the number of members it might be a good thing to increase the fees; but if you are going to increase the fees, I think it should be increased all along the line, not as last year, for the larger firms only. This year our Association has probably spent a little money on its excursion to the Old Country, but I am satisfied it has been the best investment we have ever made; it has been undoubtedly the greatest advertisement for Canada that Canada has ever had.

MR. BOOTH:—Mr. Amyot is a little mistaken in that; the British Excursion resulted in a profit to us of \$728. (Applause).

MR. E. L. DREWRY:—Mr. Chairman, representing myself and that wonderful progressive western city of Winnipeg, I believe with one of the previous speakers that numbers in an organization of this kind have a great deal of weight. While the Treasurer has pointed out, and with a good deal of pride no doubt, the large income and the large expenditure of our organization, that does not appeal to the Government at all; but the numbers of the Association we all know have a great deal of weight with the powers that be. So that I think anything that might affect the numbers of this Association should be very carefully considered indeed.



GRAND ALLEE AND PARLIAMENT BUILDINGS, QUEBEC.

I believe personally that \$10 is a very small sum, but take it in the west, where manufacturing is only beginning, and in a very small way indeed, I believe it is easier to get members at \$10 than at \$15, and I was wondering whether it would be possible to grade them still more. I understand it is now \$10 for any manufacturer up to 100 employees, and after that \$25. I think we might well make it \$15 for anyone employing more than say twenty-five employees or something of that sort. While some of us who are connected more closely with the organization and its work of course do not grumble when we see the advance, yet many of the rank and file, who know very little of it except when called on to pay their annual dues, do sometimes ask themselves the question, "What are we getting out of it?" and when you can say to them that they are only contributing \$10 a year to keep up an office in Toronto and all the paraphernalia that goes to conserve the manufacturers' interests of Canada, you appeal to them in the right way. I am rather opposed to increasing it to \$15 all along the line.

MR. W. B. TINDALL:—Mr. President, I think in discussing this that there is another way out of the difficulty, one that has been followed in some of the other institutions in Canada of a similar kind. I take it the present fees will meet all our ordinary outlays, and the method adopted in any case where there is special work and special expenditure is to leave the fees as they are and to make an assessment for those special efforts and the amount required. That of course involves a little more work for the

office, and in some cases works out better and in some cases does not work out as well. I merely offer that as a suggestion to those members who probably feel that the wiser course would be not to increase the fees on account of the desirability of maintaining our membership at the figure it has now reached, or even getting it a little greater.

MR. T. A. RUSSELL:—I have just learned by inquiry from the Secretary that we can not pass a resolution affecting this subject to-day as the fee is fixed by by-law of the Association which requires notice of motion in order to have it changed. I would, therefore, move that the meeting express itself in favor of some increase in the fee either to be on a graded basis or such other way as the Executive Council may see fit; and that the Executive Council be asked to submit a change in the by-law to the next annual meeting providing for such an amendment.

MR. BOOTH:—In reply to Mr. Tindall, I might say he is quite right. We have every reason to expect that our receipts will be quite ample to meet all our expenses for the current year. I have an estimate before me of what I expect those receipts will be, based upon our membership at the end of the year. It gives us a total of \$22,750. The estimate that I have made for the expenses of the year is \$21,525, and that is somewhat in excess of last year's expenses, which were \$19,528. However, we cannot help but increase from time to time, and I am pleased to say that already the membership is growing. When I left on the 15th of the month I found there were forty odd members added since the 1st of August.

MR. J. P. MURRAY:—I rise to second Mr. Russell's motion that this question of raising the fee be left over to the Executive to report on. I hardly think we could go into the thing thoroughly here, because it will be a broad question. I know in certain places we would not be able to get in some of the small men if we made the minimum fee \$15. The question of having it scaled, as once spoken of before when the fee was raised to \$25 for firms employing 100 and over, is one upon which I believe the Association should not arrive at a decision too hastily, but I think that something of that kind should be brought in.

MR. J. D. FLAVELLE:—Is it not a mistake to leave it in an indefinite shape, if there is any force in the remarks made by some of the speakers that it would affect the smaller manufacturer? If it is left to the Executive Committee for a year to bring in a report, it may be difficult to get the small men to come in. Would it not be better to have it on the graded plan? Assuming that \$10 is low enough, why not take all over 50 and up to 100 at \$15 and those under 50 at \$10. Let us formulate some suggestion at once, so that it will not militate against us in getting members for this year. A benefit is particularly derived by those who employ a small number of men. No manufacturing industry which can employ 200 men will ever hesitate to pay \$100 or \$150 or even \$200. I think we ought to have something definite to show that we have been making an advance all along the line.

MR. HENDERSON:—I quite agree with what has been said by Mr. Piggott and Mr. Flavelle, that there should be an increase in the membership fee, but I think it is impossible at the present time to say what the increase should be or in what way we can increase the revenue, and I would propose, seconded by Mr. Wilson, that a small committee be appointed by the President to look into the whole matter of increasing the revenue, whether by lowering the annual fee for small concerns or increasing it, or charging a subscription fee for INDUSTRIAL CANADA, or charging those members who have derived benefit from the various Departments, such as the Transportation and the Insurance Department. It is a large matter, and I do not think we could arrive at any definite conclusion to-day, especially as under the constitution we cannot pass any by-law upon it. I think the whole matter could be gone thoroughly into by a small committee. It appears to me, however, if this Association is worth anything to anyone, it is worth at least \$10 a year, because I do not believe any organization which was ever gathered together in Canada

should have such influence as this. We have many instances in many cases where this organization has done a wonderful amount of good for the manufacturers of Canada. I think there should be a small committee appointed to include the President, the Treasurer and Secretary.

THE PRESIDENT:—I suggest, Mr. Henderson, that you change that to the Finance Committee.

MR. BURTON:—Does it mean we cannot make any alteration for twelve months or can we report to the annual meeting in two or three days?

MR. BOOTH:—I don't think it would be very wise to make it this year; I don't see how we could. Quite a number of the members have paid their fees.

MR. HENDERSON:—No change can be made in the fee unless the notice of motion be given and the matter has been passed upon.

THE PRESIDENT:—There can be nothing done this year, gentlemen. I think we are all agreed that what Mr. Henderson says is true, that there is no organization that gives the same amount of results and does the same amount of work for the fee that is paid. I am not a subscriber to or a member in any organization where the returns that I get for the membership fee I pay can in any way compare with the results that are furnished by this



Association. We have a permanent staff of something like twenty-five working all the time. I think \$10 is a very small fee, it is a bagatelle. I quite agree with all the gentlemen who said that numbers were most important to the strength of our organization; and I think Mr. Drewry's suggestion that a more varied grade in the fee would be possibly the best way of overcoming the difficulty. We want the small men, but any man who employs over a certain number, twenty, thirty, fifty, or whatever you choose to make it, certainly should be large enough to realize that the fee of \$10 does not begin to pay for the results they get from this Association. So that if no one else wishes to say anything on the question I will put Mr. Henderson's amendment, which was that this matter be referred to the Finance Committee with the suggestion that they bring in a recommendation and a notice, if they decide on a change, in sufficient time to take effect at the next annual meeting. Perhaps I had better read the original motion at the same time, so that you will have a better knowledge of what you are voting on. The original motion was

that this meeting express itself in favor of the principle of an increased membership fee and that the Executive Council be asked to submit a by-law looking to the increase in the fees on a graduated basis for approval at the next general meeting.

MR. RUSSELL:—We could have put in that "With the advice or report of the Finance Committee" which will incorporate the two.

MR. HENDERSON:—If Mr. Russell mentions the Finance Committee instead of the Executive Committee I will withdraw my amendment.

MR. MURRAY:—It must come before the Executive anyway, Sir.

The President put the motion as follows: Moved by Mr. Russell, seconded by Mr. Murray, that the meeting express itself in favor of the principle of an increased membership fee, and that the Finance Committee be asked to submit a by-law looking to the increase of the fees on a graduated basis for the approval of the next general meeting, which on a vote having been taken was declared carried.

THE PRESIDENT:—Mr. Booth, the Treasurer, moves the adoption of his report.

A Contingent Fund.

MR. A. W. THOMAS:—Before the report is finally adopted, there is one item I would like to speak about. The Treasurer referred to the formation of a Rest Fund at an early date. A number of members whom I have had conversations with think that this would be a very good thing if decided upon at as early a date as possible. We all know—those who have had anything to do with the detail of the work—what constant demands are made on the Treasurer for funds for various schemes that arise during the year. All of them seem to be perfectly good, and no doubt they are, and while we have a balance in the bank of over \$4,000 there seems to be no reason for refusing a demand for money for such purposes. But these are good times, money is plentiful, the society is flourishing. Some day there may be a change, and I think it would be well that we should try to provide for a rainy day. If we could lay aside a certain portion of our surplus each year for the formation of a Rest Fund, to be under the control of trustees and not available for ordinary expenditure, but only under special resolution of the Executive Council, I think it would be a good thing. I therefore wish to move that the new Finance Committee be requested to formulate a scheme for the formation of a reserve fund and to report on the same as soon as possible to the Executive Council.

MR. S. R. HART:—I second the motion.

MR. D. LOBNE MCGIBBON:—Whilst I am in favor of the motion just made, still I think we want to look a little further ahead than that. I would suggest that instead of creating a Reserve Fund, which would not be available except by special resolution, that a Contingent Fund be first established which could be used in case of emergency. Something might arise in the Association whereby we might want to spend a certain amount of money to gain a certain object, and I think it would be better if we first established a Contingent Fund of \$10,000 or \$25,000, then we could establish a Reserve Fund later. I move in amendment that we first establish a Contingent Fund of some amount before proceeding to establish a Reserve or Rest Fund.

MR. THOMAS:—My motion simply reads that the new Finance Committee be requested to formulate a scheme for the formation of a Contingent Fund and report on the same as soon as possible to the Executive Council.

MR. PIGOTT:—I would say I am not in favor of either the motion or the amendment. I do not see the advisability of having a Rest Fund. We are not handling dangerous manufacturing plant; we can regulate our expenses by taxing the members, and I fail to see the utility of either the Rest or Contingent Fund. The point is to keep a nest egg in the bank, and we can do that by regulating our expenditure or increasing our fee. We are not an amalgamated company or a manufacturing plant where there is liable to be a depreciation of the assets. In that case it is very material to have a Rest or Contingent Fund.

MR. AMYOT:—I am perfectly in accord with Mr. Piggott. This organization is for the good and the welfare of the Manufacturers' Association and for every member of the Association. I think we can levy an increase on our fee whenever it is necessary. For myself I do not care for the words that I have just heard, that this money could be used to gain an object. I do not know what that object might be, and this cash would be in the hands of a committee and they could get at it by simply drawing a cheque on it. That cheque might be drawn to gain an object which I would not be in favor of, therefore I would oppose the motion in every way I am able.

MR. BOOTH:—My idea in suggesting this was not for the present need, but looking to the future. We are living in very prosperous times, and if we had a fund of that kind it might help us out in hard times.

MR. AMYOT:—I think the manufacturers are well able in bad times as well as good times to provide for all their wants. If you haven't enough confidence in them to depend on the future to this extent they might as well pass a resolution now and close the deal.

The President then put the motion: "Moved by Mr. Thomas, seconded by Mr. Hart, that the Finance Committee should formulate a scheme for the formation of a Contingent Fund, and report the same as soon as possible to the Executive Council," which on a vote having been taken was declared lost.

The President put the motion, moved by Mr. Booth, seconded by Mr. Taylor, that the Treasurer's report be adopted, which on a vote having been taken was declared carried.

THE PRESIDENT:—I will now call upon our Secretary, Mr. Younge, to read his report. (Applause).

THE SECRETARY'S REPORT.

MR. YOUNGE:—Mr. President and Gentlemen, the Secretary submits with pleasure his annual report. The year just closed has been one of the busiest and most progressive in the history of the Association.

Prominent Features.

The membership has increased by 328, nearly 25 per cent. The new Department of Insurance has been inaugurated; the success of the Transportation Department organized last year has been placed beyond all doubt; the urgent advocacy of a general tariff revision has at last proved successful; an excursion to Great Britain has been carried out with great credit to the Association; detrimental legislation has been successfully opposed; INDUSTRIAL CANADA has improved in size and style surpassing expectation; a new Trade Index is in process of preparation, and many other achievements too great in number and detail to mention have been accomplished through the Association for the good of Canadian manufacturing industries. All of these features are covered more fully in the reports of the various committees now in your hands. Every one of these reports is worthy of your special consideration. They represent much time and energy, concentrated on your behalf by as many faithful committees, whose only reward is the good results flowing from their labors.

The report of the Insurance Committee is the first presented from the new department. It is deserving of more than passing notice, and I wish specially to commend the department as one of the most practical and useful branches of our work.

The results from our Transportation Department are both surprising and far-reaching. They indicate that the Association has already become one of the most powerful factors in the development of Canadian transportation.

The report of the Tariff Committee is the most hopeful submitted by that committee for some years, and the industries in every part of the Dominion are looking forward with keen interest to the general revision now pending.

The work of the other committees is correspondingly important. All the reports go to show that there is no important phase of national development affecting the business interests of the country, in which the Association is not taking a prominent

part, and while they also indicate many of the advantages which are daily flowing to the manufacturers of Canada through the organization, they are necessarily too brief to cover fully the vast field of operations where the Association is constantly making its influence felt in behalf of its members.

Offices and Branches.

At the Head Office 155 Committee meetings have been held during the year, with an average attendance of seven. At the various branch centres, meetings have been held more or less regularly, the work accomplished by the branches in Montreal and Toronto being particularly successful. A closer connection is desired between the distant members and the Head Office, and the strength and influence of local branches may be largely increased if their Executive Committees and members will take a more active interest in the local and provincial issues which are continually arising, and which so often involve the welfare of the industries.

The Excursion.

Aside from the valuable work accomplished at home, the Association has performed, during the year, a service at once national and imperial, in the excursion to Great Britain. This was not undertaken without personal sacrifice on the part of



MR. R. J. YOUNGE
Secretary.

the officers, but the excursion will always rank among the most important achievements of the Association, and the results will contribute in no small measure to the development of Canada.

Present Needs.

Turning to the practical work of the Association, I beg to call your attention again, and more urgently than ever before, to the need for new and larger Head Offices. I can scarcely describe to you the difficulties with which our work is carried on in our present premises, where our departments are separated, and our facilities quite inadequate. I may also point out that with the rapid growth of the Association, and the development of our new departments, it is necessary to make additions to the office staff. I believe that we have now reached a point where we could employ with great advantage a travelling secretary, whose whole time would be devoted to calling upon our members, in order to discuss the problems which confront them individually, and bring them into closer touch with our various

committees and departments. I trust this suggestion will meet with your consideration. We are face to face with the fact that our present revenue is no more than sufficient for the actual expenditure, and unless the membership can be materially extended, or the annual fee increased, it would seem impossible to keep pace with the growing necessities of the work. I feel certain, however, that with the progress of our plans, and the growing importance of the benefits flowing from the work, provision will be made for carrying out the forward policy.

Acknowledgment.

At the close of a busy year, I desire to record my grateful appreciation of the unfailing support given me during the year by the President of the Association, and all the other officers and committees. Their faithfulness to duty calls for the hearty thanks of the entire membership; indeed, the services they have rendered at so much sacrifice to their personal interests, can scarcely be appreciated.

It gives me great pleasure, also, to testify to the very able services and devotion to duty of the officers surrounding me, Mr. J. F. M. Stewart, Mr. G. M. Murray, Mr. J. R. Marlow, Mr. Dakers Cameron, in the Montreal Branch, Mr. E. P. Heaton, Mr. B. L. Anderson, and all the other members of the staff. Much of our progress in the various departments is due to them.

In conclusion, I believe that we may see in the work of the past year, many reasons for satisfaction. A great deal of good work has been accomplished, and yet we are just beginning to see what magnificent possibilities lie before the Association. It has reached a point in its development where its national character, its high ideals and its sincerity are beyond question. What its future shall be depends on the earnest co-operation of its members.

Respectfully submitted,
R. J. YOUNGE, *Secretary*.

New Offices.

THE PRESIDENT:—I think perhaps there are two points in Mr. Younge's report on which the opinion of the meeting would be appreciated by the Executive and by the office staff. First, in reference to new offices, and second, in reference to the employment of a travelling secretary. I don't think that anyone who is acquainted with our office accommodation in Toronto will venture a suggestion that it is sufficient. It is neither sufficient nor in keeping with the standing or dignity of the Association. I think just as soon as we possibly can obtain satisfactory offices in Toronto for the head office it should be done.

In reference to the employment of a travelling secretary, that is a question that will require a good deal of consideration. The ways and means will have to be found first. But I do believe that it would be a very material benefit to many of our outside members. Many a time they must have some trouble and some difficulty which they would like to have handled for them, and if they realized it could be handled for them by the Association, they would be glad to avail themselves of the opportunity. The difficulty is that those who do not come in direct contact with the work of the Association do not know what it is possible to call on the Association for. If from time to time a travelling secretary were calling on them and talking over their difficulties, he would, I am sure, be able to help them in many ways, and demonstrate the usefulness of the organization and in that way add to its strength and membership throughout the whole Dominion.

MR. PIGGOTT:—I very heartily endorse the few remarks you have made, Mr. Chairman. Only last week I made a call at the head office, and the reflection passed through my mind that it in no way sustained the dignity of the institution. I am sure it is advisable to make an improvement. There are, also, many advantages appertaining to a travelling secretary. I think it would be the means of securing many new members. The advisability of establishing more branch offices would also come under this department. I am sure we could very materially increase the strength and power of this institution, and I am of the opinion that both moves should be adopted by the Association.

MR. M. C. HUYETTE:—I am in the same building with your offices. I am on the fifth floor; you have rooms both above and below me. That is not as it should be, nor are the offices themselves at all in keeping with the dignity of the Association. I heartily approve of the suggestion that better quarters should be secured as soon as possible.

THE PRESIDENT:—I think every one is agreed on that point. The chief difficulty is that there are no other available offices in the city of Toronto that are satisfactory. We do hope in the comparatively near future there will be other offices available that will be satisfactory in every respect. And I know I voice the opinion of every one who knows our head office when I say it is your idea that we should move into more satisfactory offices where better accommodation is furnished and where the whole appearance is more in keeping with the size and character and dignity of the Canadian Manufacturers' Association.

As to the other question of a travelling secretary, I do not know that anything can be done with it to-day. If anyone has any opinion to express we would be very glad to hear it.

MR. DREWRY:—I may mention if you have any difficulty in Toronto in securing proper offices there are some very fine office buildings being erected in Winnipeg, and if you will speak quickly you might secure a flat or two. (Laughter).

On motion of Mr. Henderson, seconded by Mr. McLaughlin, the Secretary's report was adopted.



ST. JEAN STREET, QUEBEC.

A Travelling Secretary.

MR. PIGGOTT:—I would move that the sense of this meeting be taken as to a travelling secretary. I would move that the Association employ a travelling secretary.

MR. BOOTH:—Before we go quite so far as that we ought to find out a little more what it is going to cost.

MR. ROBERT McLAUGHLIN:—I believe, Mr. Chairman, that if we got the proper man as travelling secretary it would be a paying investment. I suppose we could not do better than leave it in the hands of the Finance Committee to be reported to the Executive Committee. I think that the interests of the entire organization are pretty safe in the hands of our Executive Committee appointed by yourselves to take charge of these things. I agree with Mr. Piggott that we are going to be able to get better offices and that you will also be able to get a good travelling secretary and that there will be money in it if you get the right man.

MR. DAN WILSON (Collingwood):—I think the report of the Secretary is a very important one to this Association, and deserves more attention than can be given to it by just hearing it read and considering it. I think if it were referred to a committee appointed by the President they would digest the matter and consult with the Secretary. He, no doubt, has thought a good deal along the lines of improvement of the Association. That committee could then submit to this Association a concrete report that would be adopted and money could be given them to

work on. With your permission I would move that the President appoint a committee.

MR. WILSON (Ingersoll):—I second that.

The President stated the motion that the President appoint a committee for the purpose of considering the Secretary's Report, and bringing in a recommendation to the Executive Council along the lines suggested by the Secretary.

MR. WILSON:—My idea was not submitting it to the Executive Council but to this Association at a later stage, and the vote of this Association could be taken and the Executive Council would know then the opinion of the Association.

THE PRESIDENT:—It could only be taken by mail.

MR. WILSON:—That special committee could take the matter up now and report to this Convention before it closes. They could consult with the Secretary in the meantime and get his ideas. They would digest the matter and present it in some concrete form, and when we had taken a vote upon it the Executive would then know what the opinion of the Association was on the subject.

MR. HENDERSON:—It would perhaps be better to wait until we get the report of the Finance Committee in regard to ways and means; then the Executive Council would have a better idea how far they could go in the way of expenses. This Convention might say we will make a new fund and appoint a travelling secretary, and when it comes to the Finance Committee the Finance Committee might say, we don't see our way to finance it. I think it would be better to refer that to the Executive Council, who are better able to judge than we would be to-day.

THE PRESIDENT:—I think it will have to go through the Finance Committee. The Treasurer's Report does not seem to indicate it is possible to assume any further responsibility in the way of expenses at present. I think if Mr. Wilson would make his motion that way, that the Finance Committee be instructed to consider this question and report to the Executive, the Executive can take action for you. In a matter of this kind it will require a good deal of study and figuring out. I think the Finance Committee will be able to do it better back in the head office. However, gentlemen, it is of course for yourselves to decide.

MR. WILSON:—If you think it would be better to have it done in that way I would alter the motion with the permission of my seconder.

The permission of the seconder being granted, the President put the motion, which, on a vote having been taken, was declared carried.

THE PRESIDENT:—In the absence of the Chairman and Vice-Chairman of the Parliamentary Committee, I will call upon our Secretary to read the report of that Committee.

The Secretary, Mr. Younge, presented the report of the Parliamentary Committee, which, upon motion of Mr. Henderson, was taken up clause by clause.

REPORT OF THE PARLIAMENTARY COMMITTEE.

Your Parliamentary Committee is pleased to present herewith a report of its work during the past year. Eleven meetings have been held, and at each meeting matters of far-reaching importance were dealt with.

The Labor Situation.

Difficulties between employers and employees have not been so numerous or so serious during the last year as for some time previously. The rank and file of Canadian work people have been convinced that ill-advised strikes are neither profitable nor popular. The employers generally have realized that they must control their own enterprises, and many shops that were formerly union shops have been declared open. Were it not for the too frequent appearance of the United States business agent or agitator, we believe that conditions in Canada between the workmen and employers would be generally satisfactory.

The labor market is healthy. There is work at good wages for all who are willing to work. There may be a small surplus of laborers in the larger centres, but this only for the reason that they prefer to live in the cities rather than accept steady

work in the small towns. In order to keep in close touch with the conditions, your Committee has issued two labor inquiry circulars—one in February, the other in June. At both of these dates a large supply of skilled labor (both male and female) was required.

Dominion Legislation.

The labor unions have been continuously represented in Ottawa during the last Session of the Dominion Parliament and have taken advantage of every opportunity to advance their views. The Parliamentary Committee on this account decided that it was advisable for a representative of the Association to spend considerable time in Ottawa, and to keep in close touch with the various Parliamentary matters likely to affect the members of the Association. The Assistant Secretary, Mr. J. F. M. Stewart, was given charge of this work. The value of having all legisla-



MR. F. B. POLSON
(The Polson Iron Works, Ltd.)
Chairman Parliamentary Committee, 1904-1905.

tion under the direct and personal supervision of an officer of the Association is shown in the splendid results accomplished.

Union Label Bill.

The Union Label Bill, the objects of which are well known to the members of the Association, was re-introduced into the House of Commons by Mr. Ralph Smith, M.P., on January 3rd, 1905. Up to 1901 it was introduced as an amendment to the Trade Mark and Design Act, although the Bill was in direct conflict with the spirit of that Act. Since then, it has been advanced under its own name "An Act respecting Labor Union Labels."

The House of Commons showed in no unmistakable way that the legislation was not approved of. It did not go so far as to kill the Bill, but, after debating it on three different days, it limited its application so that it permitted none but unions "duly incorporated" to register their labels. The Bill was also fully debated in the Senate and from there referred to the Banking and Commerce Committee.

In addition to representation at Ottawa, the Association published three statements opposing the Bill and distributed them to the members of both Houses of Parliament. When the Bill was before the Banking and Commerce Committee our representative replied fully to the arguments advanced by the unions.

It is very gratifying to be able to report the defeat of the Bill, as it represented a most dangerous type of legislation. Its

passage was urged chiefly by members of the International unions who, taken as a whole, represent only a very small fraction of our work people. To employers generally and to the public the Bill was most objectionable.

Act Respecting Immigration.

An Act respecting false representations to induce immigration was introduced by Mr. H. J. Logan, M.P. This imposed a penalty on any one in Canada making false representations intended to encourage emigrants to come to Canada. The Parliamentary Committee did not quarrel with the principle here involved, but took the ground that the penalty should also apply to persons making false representations to *deter* emigrants from coming to Canada. This suggestion was accepted by the House of Commons, and the Bill was amended accordingly.

Bill No. 67.

Bill No. 67, an Act to amend the Criminal Code, introduced by Mr. Hugh Guthrie, M.P., provided that in cases where an arrest was made under section 523 of the Code, which has to do with strikes, lockouts, picketing, etc., that the accused could elect whether or not he would be tried summarily or on indictment. This Bill was introduced early in the Session but dropped. In the dying hours of Parliament it was cleverly attached to a bill dealing with Trading Stamps and railroaded through. The Association took the ground, which has also been held in the courts, that it should be for the magistrate to say how the accused should be tried. If an arrest is made and the accused elected to be tried by jury he would be let out on bail and be on the street again, with his fellow-strikers in a few hours, and consequently the arrest would not have the effect of preventing further lawless acts. Punishment in labor troubles, on account of their peculiar nature must be prompt to be effective. To postpone a trial for six months to a time when the labor trouble is settled and when evidence is hard to secure not only defeats the intention of the Act, but is apt to cause further strife between the parties most interested.

MR. PIGGOTT:—With reference to Bill No. 67, I wish to ask if any action has been taken to have that bill repealed. I think it is very material to have a repeal of that. It is a well-known fact to any employer of labor that if the unions can secure what legislation they desire there will be no chance for the manufacturer to live in this country.

THE PRESIDENT:—Nothing has been done yet. There has been no opportunity of course.

Extension of Patents.

Three different Bills were introduced to permit the importation into Canada of certain articles patented in Canada, but not manufactured here. Your Committee opposed the principle here introduced as opening the way to practices that might have very serious results. All three bills were withdrawn.

The Senate Safeguard.

While a number of daily papers are publishing editorials advocating the reform or abolition of the Senate, we do not think it out of place to note that it has been to a large extent the Senate that has protected the business people of the Dominion from class legislation. The Canadian public must frankly acknowledge their indebtedness to the Senate for this service.

United States Silver Coinage.

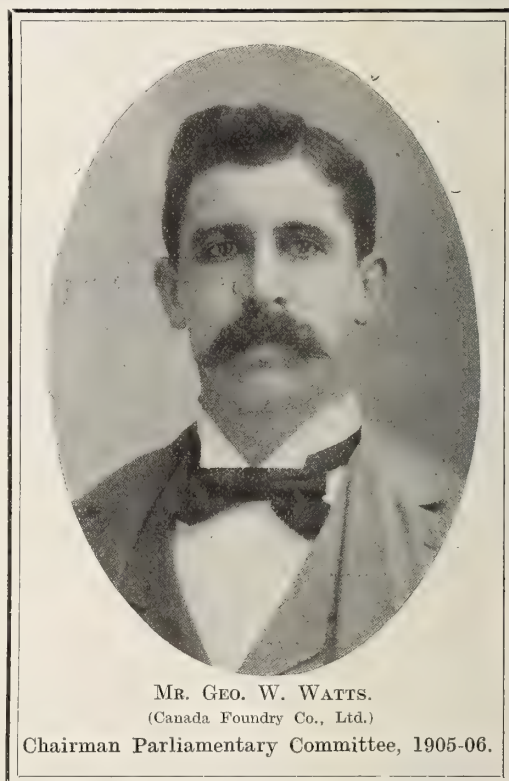
At the Convention of 1903 a resolution was passed requesting the co-operation of the banks and the Government to secure the removal from circulation in Canada of foreign silver coinage. Your Committee took this matter up with the Minister of Finance and the President of the Canadian Bankers' Association, and it gives us pleasure to record our appreciation of the manner in which this was handled by the parties named. The Government has undertaken to pay the chartered banks a small percentage for collecting this United States currency and shipping it to the United States. The resolution of the 1903 convention stated that

it was "in the interests of Canada for financial and patriotic reasons" that we should use our own currency, and we trust this new arrangement shall bear evidence of the correctness of that statement.

Commercial Travellers' Taxes.

The Provinces of Canada in their search for sources of revenue have adopted certain measures which have certainly not been considered from the standpoint of our national weal. The Commercial Travellers and Extra-Provincial Corporation Licenses are both hindrances to that freedom of trade which we should encourage in every way possible between the different Provinces. No Provincial Government should be dependent for any part of its revenue on a tax levied against the energy and enterprise of a neighboring Province.

Prince Edward Island, the first to impose a Commercial Travellers Tax, passed an Act in 1904 fixing the license at \$20.00. This was not an unreasonable tax provided the principle was sound, but it is questionable if it should not have been disallowed by the Dominion Government on the ground that it was a hindrance to inter-provincial trade. The wholesale merchants and the manufacturers were much disturbed this year over the Act



MR. GEO. W. WATTS.
(Canada Foundry Co., Ltd.)

Chairman Parliamentary Committee, 1905-06.

of the British Columbia legislature which made a license fee of \$100 for each six months on every traveller for liquor and cigars, and \$50 for each six months on all other travellers.

This Act was strongly objected to by the Commercial Travellers' Associations and by our own Association. It was, however, passed by the legislature and we then put the facts before the Premier and the Minister of Justice and asked that the law be disallowed. The Dominion Government has one year in which to take such action, and we understand that negotiations are now under way between the two governments. The very nature of this legislation makes it objectionable, and the Province should repeal the Act, if for no other reason than that it is directly contrary to the national spirit that to-day exists everywhere throughout Canada.

An Act passed this year by the Province of Quebec imposes a license on travellers of foreign firms not resident in Canada and consequently the same reasons cannot be advanced against it, but it is exercising a detrimental influence on Canadian trade with British Dominions, and we hope the wisdom of having it modified in favor of British firms may soon be apparent.

MR. AMYOT:—Mr. Chairman, referring to the last clause read, as a firm doing business all over Canada from coast to coast I am absolutely opposed to any such Act as the Provincial Government has passed at its last session. I was not here when it was passed, otherwise I would have done my best to assist our Association in opposing it in a very formal manner. (Applause). No doubt these Acts are passed without consulting those that have some experience in the matter. Any firm doing business locally does not feel these Acts of obstruction, but a firm that does business over all the country does not want any obstruction of that kind. In my mind it is a great restriction on trade, and if in this Canada of ours we are all enjoying the same privileges, I do not see why each province should put up a fence against the other. Now this country is considered to have been brought together, to have been put into one, and I think we should be at liberty to do business with one another. Unfortunately one province puts up a license and another puts up another, and pretty soon each will have a legislation of its own and its own tax. I think the Association should go into this matter very thoroughly, and pray the Government to do away with all these taxes. (Hear, hear).

MR. PIGGOTT:—I would move we take a vote on this matter. I think it is a decided step in the wrong direction. We will soon get down to the situation in Europe where there are taxes collected as between one municipality and another. I think it is backward instead of forward legislation. I would move that the sense of this our annual meeting be taken, and I hope it will be an unanimous vote, and the result be made known to the Secretary of the Provincial Legislature in Quebec and British Columbia.

MR. AMYOT:—You cannot do that without including Ontario, because they started the ball when they imposed a tax on incorporated companies. It originated there.

MR. HENDERSON:—I think I might suggest the next clause be taken with this one here, and that would cover the whole thing.

MR. MURRAY:—Touching on this point and referring particularly to British Columbia, I am informed that the Government there empowered each municipality to impose an additional tax, equal in amount to the provincial tax, should it so desire. I do not think that that is generally known. So that it makes the British Columbia Act a great deal worse than the Quebec one.

MR. EDWARD GURNEY:—Under our system of Government established by our provinces certain well defined principles were observed, and amongst other things I believe the trade between the provinces was fixed as being determinable by the Dominion Government. Now, sir, I think that every citizen of Canada should look to the conservation not alone of Provincial rights but of Dominion rights. There has been a struggle in the United States from the beginning of the history of that country as between State rights and Federal rights. They settled the question by a war. Now, sir, I believe that we are in the stages of forming by precedent a constitution, and I believe that every citizen of this country, not alone manufacturers and merchants, but every citizen of the country should look to it that his representative in Parliament is true to the rights not alone of the Provinces but of the Dominion; and I believe that all trade legislation should be under the control of a central Government. (Applause).

MR. HENDERSON:—I think we are all agreed on that question along the lines that have been expressed by practically every gentleman speaking. Perhaps it would be better if Mr. Piggott would put his motion in the form of a resolution, and have it come before the Resolutions Committee. It should be given all the strength and importance that it is possible to give it, so that it could be sent on to the Convention of Provincial Premiers, and in that way exert an influence in securing the repeal of these provincial taxes and extra-provincial licenses. I think if Mr. Piggott will accept that suggestion and have that resolution drafted it will be the better way, and the Resolutions Committee will look for something along that line.

Extra Provincial Corporation Tax.

Another tax just as objectionable from a national standpoint as the Travellers Tax is that on Extra-Provincial Corporations.

Such a tax exists in the different Provinces. It is a most unfortunate condition that persuades or enables any Province to charge a company, holding a charter from the Dominion or the Government of a sister Province, a fee before it can do business within the Province. A company holding a Dominion charter is liable to be taxed on its charter in every Province in Canada and to pay a tax on all of its travellers entering two Provinces.

The Quebec law differs from that of the other Provinces in that it is provided that the law shall not be operative against companies incorporated by a Province which does not compel Quebec companies to take out a license. This we believe shows the lines along which action should be taken and the members of the Association in the various Provinces should endeavor to have their governments amend their different Acts in accordance with the Quebec Act and accept Quebec's standing offer. The matter has been presented to the Ontario Government, and your Committee is hopeful that action will be taken at the next session of the Legislature.

MR. HENDERSON:—I think it would be well to refer to that also in the resolution. A Dominion charter company ought to be able to do business in its own province without any restriction. I do not know whether or not Mr. Piggott intended to mention that in his resolution but I offer it as a suggestion that he does. It appears to me to be a most infamous tax.



THE ST. LOUIS GATE, QUEBEC.

THE PRESIDENT:—It is understood both of those questions shall be included in that resolution. If that is the will of the meeting we will consider that clause passed.

Pure Food Laws.

In conjunction with the Canadian Branch of the Society of Chemical Industry, a number of recommendations have been made to the Minister of Inland Revenue which, if adopted, we believe will considerably improve the present Pure Food Act. To safeguard the public and to facilitate analyses were the objects of the recommendations, and they referred to,—

- (a) Specific regulations for the use of preservatives.
- (b) Proper label on goods.
- (c) System of district analysts with the privilege of an appeal to Ottawa.

The Minister is expected to issue shortly a bulletin and it will not be known till then whether or not these changes are adopted.

Incorporated Company Franchise.

A question of great importance to all incorporated companies is the disability under which they are at present operating, in that they are not accorded a franchise and a privilege to express their views in Parliamentary or Municipal Elections or on Money By-laws. A large corporation will pay as much taxes as probably all the men in the employ of the corporation, yet each of these men will have a vote while the company does not have the same privilege. This is a condition which has arisen in recent years, since incorporated companies have greatly increased

in number. On account of incorporation, however, very important interests and investments are treated differently from partnerships and are prevented from giving expression to their views. The question of franchise is provincial, and we urge upon the branches of the Association the advisability of putting this condition of affairs before their provincial governments and asking for a remedy.

Provincial Affairs.

The members of the Association in the different Provinces have as usual watched carefully the legislation that has been introduced into the different Legislatures. Ontario and Quebec have required more attention than the other Provinces, but in each Province our branches have been active.

Ontario.

The one Act which it was found necessary to oppose in Ontario was that designed "to regulate Stationary Engineers." This provided that every engineer operating a steam plant of a certain size should have a license which could be secured only by an examination given by a named board. The Association claimed that the Workmen's Compensation Act, the Common Law, The Boiler Inspectors of insurance companies and the care of the manufacturers provided sufficient protection, and the change as proposed placed the control of the steam plants of the Province to a large extent under the control of the Society of Stationary Engineers. The Bill was defeated.

Manufacturing Statistics.

The Bureau of Labor has for many years past been asking the manufacturers of the Province of Ontario to give certain business returns of a confidential nature; the returns to be used for the purpose of compiling figures to show the exact position of labor and manufacturing in the Province. The Bureau of Labor which asked for the returns has at its head a recognized leader and officer in both Canadian and International Unions, and it should be impossible for him as the mouthpiece of the unions, to have access to such confidential information. A notice was sent to the members of the Association advising them that the returns asked for were not compulsory. As a result of this letter, only 178 manufacturers in the Province replied to the circular, and we presume that none of these were members of the Association.

MR. HENDERSON:—Would it be in order for the Association to make a report to the Ontario Government of the reason why proper returns were not put in, because the gentleman in charge of this department is at the head of a labor organization?

THE PRESIDENT:—I think that representation has already been made, Mr. Henderson. It was made prior to the change in Government; I think at that time our representatives were told that the Government had no knowledge of the fact that the gentleman who was head of the department, was also the gentleman whose name constantly appeared in the papers as vice-president or president of certain labor unions, and the organizer of certain unions and the officer of certain unions. It was rather an evasive answer to give, I think, and the gentleman is still in the position. We have tried to make it clear it is not a refusal to give information which can be of service, and which the Government would have a right to ask for, but the fact that we do object to giving information of a confidential character into the hands of an officer whose impartiality we have every reason to suspect.

MR. HENDERSON:—If I may be permitted I will bring that matter before the Resolutions Committee.

THE PRESIDENT:—You may send it on.

Taxes on Machinery.

The Association requested the Ontario Provincial Government to amend the Municipal Act to allow municipal councils by a two-thirds vote to extend the exemption from taxes on machinery for the year 1905. The Act was amended as requested. Certain features of the Ontario Assessment Act and the departmental supervision of the factory inspectors were also discussed with the Government.

Quebec Legislation.

Two Bills in the Quebec Legislature, known as the Perrault Bill and the Lafontaine Bill, were strongly opposed by the Montreal and Quebec Branches. The Perrault Bill provided that at any time when a majority of the persons employed in the Province at any trade or occupation should be in favor of the maximum number of working hours per day or week in such trade or occupation being fixed or changed, the Lieut.-Governor might by Order-in-Council, proclaim the maximum number of working hours for such trade or occupation. The Lafontaine Bill was intended to forbid the employment of any one in an establishment where steam was the motive power, for more than ten hours in one day, or sixty hours in one week. Both of these Bills were killed in the Lower House.

THE PRESIDENT:—We have with us Mr. Blouin, one of our members who has been very active in reference to Quebec legislation, and we would be very glad to hear from him.

MR. J. B. BLOUIN:—Mr. President, I do not want to take up the time of the session with a long speech, but I may assure this Association that I have done very little for them. What I have done has been to have an eye open for all kinds of legislation as mentioned before. It is very difficult for any one individual to come out strong on the matter, but work has been done, and I can assure the Association that more work is going to be done in the future.

The Secretary completed the reading of the report.

Other matters, probably less important, were dealt with by your Committee. We might mention:—

Several propositions from immigration agents.

The Census Bill.

Provincial Insolvency Acts.

Wholesale Grocers' Guild Methods.

Water Supply in Niagara River, etc.

In concluding this report, we wish to offer our best thanks for the generous assistance given by our members during the year, on several matters in connection with which the results might have been quite different had they not co-operated closely with us. We cannot speak too highly also of the particular attention given to our representatives by the Senators and Members of Parliament at Ottawa, and by Members of the Provincial Legislatures.

As a whole, the work of the year has been successful. The labor unions have not succeeded with their dangerous legislation, and without doubt our local and Dominion legislators are appreciating to-day more than ever before that the best way to keep industrial peace and prosperity is not to confer upon labor unions, and other irresponsible bodies, powers which may readily become weapons in their hands.

All of which is submitted,

F. B. POLSON,
Chairman.

R. J. YOUNGE,
Secretary.

The report which had been carried clause by clause as read, was, on motion of Mr. Roden, seconded by Mr. Wilson of Ingersoll, adopted as a whole.

The Secretary made announcements, after which the Convention adjourned at 4.15 p.m.

THE PUBLIC RECEPTION.

At 8 o'clock a public reception was tendered the visiting manufacturers and their ladies by the Mayor and Aldermen, and by the members of the Quebec Branch. The handsome new City Hall, which will long stand as a monument to the splendid administration of Mayor Parent, opened wide her doors, and extended a welcome such as only Quebec can extend.

From the main entrance to the sidewalk an awning had been erected to protect the guests from the drizzling rain. Above the doorway an electric "Welcome" greeted them as they ascended the steps. Within all was brilliancy and animation. The corridors were gaily festooned with bunting and mottoes, the Union

Jack and the Fleur de Lys being much in evidence. Flowers, ferns and palms were everywhere to be seen in great profusion. The presence of a military guard of honor lent an added charm and dignity to the occasion, and could not but remind the visitor with a thrill of pride that he was in the Gibraltar of America. The occasion was further graced by the presence of many of Quebec's fairest daughters, whose only concern seemed to be the comfort and enjoyment of the visitors.

The Mayor received in his private offices, through which the guests passed to the Council Chamber beyond, where, after a brief half hour of music and conversation, His Worship delivered the following address:—

Mr. President, Ladies and Gentlemen:

The Mayor and Aldermen of the City of Quebec are happy to receive you here, this evening, and they highly appreciate the honor you do them in coming in such large numbers, to accept their frank and cordial hospitality. It is a veritable satisfaction for us to tender you the welcome of Quebec in our City Hall. We flatter ourselves that it will make a favorable impression on you, and that you will see a tangible proof of the progress that we are striving to make in our good city of Quebec. We feel honored by the selection which you have made of our city for the holding of this congress, and this pleasant meeting furnishes us the opportunity of congratulating you upon the success which your Association has achieved during the visit which, as a body, you recently paid to Europe. The importance of your conventions, the widely spread reports of your deliberations, had already contributed to advertise our country abroad, but the right royal welcome which you have received, in Paris, in London and at Windsor Castle, have added fresh lustre to the good reputation of our country.

On other occasions, we are pleased to recall the beauties of our site and the interesting souvenirs which fill the annals of our city. We do not doubt but that you, on your part, will yield to that charm. But the influence of the capital you represent, the important role you play in the development and increase of our national wealth and prosperity, incite us to dwell more particularly on the temporal interests of our city, the natural advantages of our port and of our geographical position, and the hope we entertain of making our city one of the most important centres of commercial and industrial activity in this dear Canada of ours. It is not for us to undertake a demonstration of the advantages nature has lavished on this particular point of our soil, the wonderful development of which they are susceptible through the application of the resources of science, of invention and modern discoveries. You are competent judges in these matters, and we hope that the opinion you will carry away will be favorable to Quebec. We attach to your visit and to your sojourn in our midst, an exceptional importance, especially just now when it seems to us that the hour of transformation for Quebec is about to sound. The assured completion of the great bridge, the construction of a new transcontinental line, the entrance into our city of several railroads, which are going to draw us out of the isolation from which we have suffered so long, the natural facilities of our port, susceptible of so vast a development, the reputation of intelligence and ability, the special aptness of our working population, strengthen in us the hope of a better future. What marvellous results would be achieved for our city through your effective co-operation, Gentlemen, if your passage in our midst will have the effect of implanting here, a few at least of the flourishing industries of which you are the chiefs, or the authorized representatives! It is our hope that the meetings of the Congress of Canadian Manufacturers of 1905 will be memorable to us in many ways, and that apart from the pleasure of meeting you in social and friendly intercourse, some manifest proofs will remain standing among us of the confidence you share with us in the future of Quebec.

What will help us to keep a kind and ever fresh remembrance of your visit here, is the charming feature which is added to

this Congress by the brilliant assemblage of fair and distinguished ladies whom you have brought with you, and whose presence enhances the brightness of to-day's gathering.

Ladies and Gentlemen, once more you are welcome, and we thank you cordially for having in such large numbers gracefully responded to our hearty and very sincere invitation. (Applause).

After His Worship, the Mayor, had delivered his address, Mr. G. A. Vandry, Chairman of the Quebec Branch of the Association, made the following address:—

Mr. President, Ladies and Gentlemen:

I have the honor, as President of the Quebec section of the Association, to extend the greetings of the members of our local branch, and in their behalf, bid you welcome to the old historic city of Quebec, the ancient Capital of Old Canada.

Our most earnest wish is that you and your ladies will enjoy your visit, and carry away with you on your return to your homes, not only a favorable and lasting impression of the scenic



HON. S. N. PARENT, K.C.

Mayor of the City of Quebec, Chairman of the Transcontinental Railway Commission, Late Prime Minister Province of Quebec.

effects of our fair city, but of the population whom you will be called upon to mingle with for the coming short period of your sojourn among us, and in whose name I likewise cordially wish you a sincere and heartfelt welcome.

We are deeply sensible of the honor you have conferred upon the City of Quebec and its citizens in choosing for your annual convention the ancient city of the oldest province of the Dominion of Canada, the cradle of Canadian civilization, energy, and enterprising industry, later developed in the West to a wonderful degree, which is attracting the attention and admiration of the whole world.

Though we have come together as associates for our common weal and the industrial progress and welfare of Canada, and you will be called upon to devote considerable time and attention discussing mutual benefits, that will be derived by an interchange of ideas coupled with valuable suggestions, it is our desire that you seize every opportunity to observe the advantages that the city and district of Quebec, with the grand and mighty River

St. Lawrence flowing past its doors, with all the majesty of its greatness, offers as a centre for manufacturing industries.

Observe closely, and without prejudice, and you will realize with the full force of your keen intellect and business instincts the many, and I might say without exaggeration or fear of contradiction, incomparable opportunities that are offered for industrial enterprises that do not generally exist, in any other part of the Dominion.

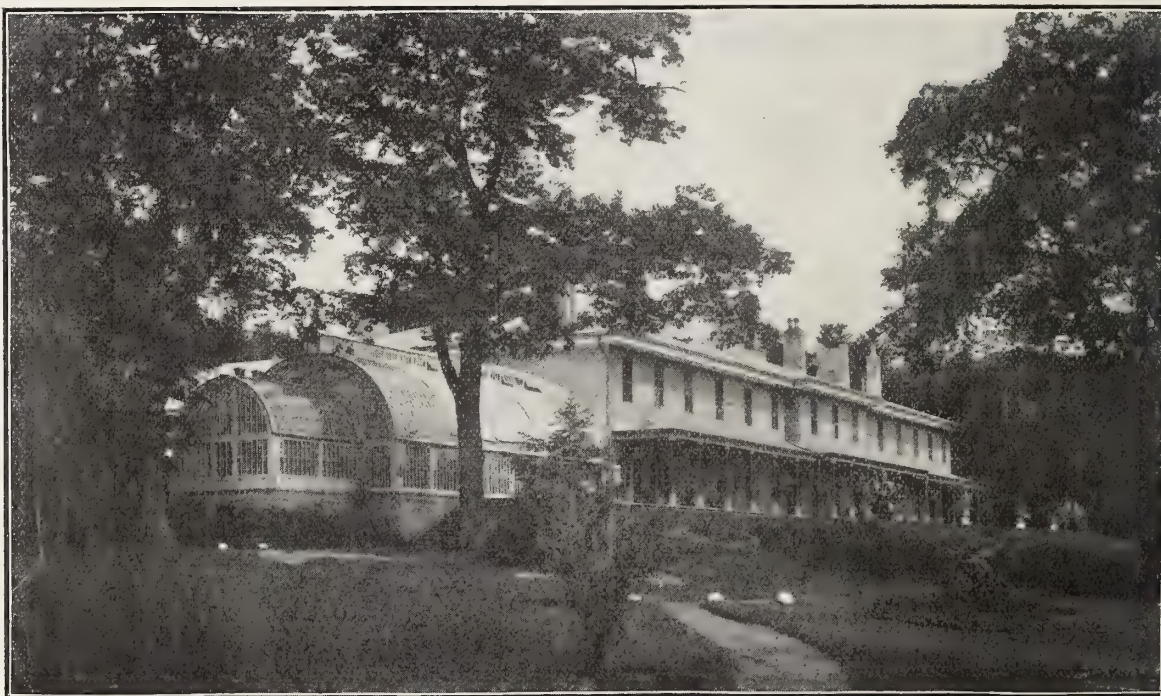
It is no idle boast, Mr. President, Ladies and Gentlemen, to say that Quebec is on the eve of a new era of prosperity; that she is destined for a bright future, and before many years, will forge herself into the front ranks of commercial progress, through the completion of the Grand Trunk Pacific Railway, of the La Tuque branch of the Quebec and Lake St. John Railway; the construction of the same railroad extension to the farm lands and lumber preserves of the Lake St. John district, and the mineral fields north of us, together with the opening up of the James Bay district, and completion of the great national bridge that will span the St. Lawrence, and connect the South with the North shore, making railway continuation an accomplished fact from the Atlantic to the Pacific.

summer of 1908, in conjunction with the celebration of our triennial anniversary. If we should decide on instituting such a Fair, we will not only cordially invite you to enter the list of competitors, but will earnestly solicit your material aid to make the exhibition, which will be open to the whole world, a success.

Should our aspirations be realized in regard to the holding of this prospective exhibition we have in mind, we will require your assistance to make it an undertaking that will not only be a credit to our city, but the whole of Canada, and bring to us all world-wide renown.

It will go far to demonstrate Canada's present and future greatness, and at the same time educate the world to the rich resources of our common country, and the energetic enterprise of the whole Canadian race, united as we are in strong bonds of sympathy for our country's welfare, and loyalty to the Government that has bestowed upon us incomparable liberty, and institutions unexampled in the rest of the universe.

Presuming that many of you are strangers to Quebec, we earnestly wish you, in your association and observation of our



SPENCERWOOD, QUEBEC.

The Residence of the Lieutenant-Governor, Sir Louis Jette.

When these public works now under construction are finished, Quebec will become the great Canadian shipping port of the future, and by force of circumstances an important factor in the progress and prosperity of our common country, sharing its benefits with the whole prospective, vast Dominion.

Handicapped for its want of capital, Quebec has not kept pace with her sister cities of the West in recent years; nevertheless, by dint of perseverance and honest dealings, we have succeeded in building up manufacturing industry that is second to none in reputation for integrity. There still remains, however, a plethora of golden opportunities for capital seeking investment, and the citizens of Quebec will be pleased to have you come among us with your brains and money to develop these uncultivated fields of wealth.

In order to graphically illustrate our recent progress, and make known the great possibilities of our undeveloped resources, the commercial interests of this city have under consideration the idea of holding a mammoth World's Fair in Quebec in the

city, to mingle as much as possible with our population, in order that you will know and understand our characteristics. We are a cosmopolitan aggregation, composed of the descendants of France, England, Ireland, Scotland, and even other nations of the old world, but notwithstanding, we are all Canadians, living in perfect peace and harmony with each other, in honest and friendly competition in the battle of life, and in unison in the love and interests of our city and country. You will find that we are ever united as British Canadians, loyal to the Union Jack, the flag that not only affords us protection, but which has given us the fairest and most independent country on the face of the earth. We are, in fact, the descendants of two great nations, who have met in war, but now mingle together in peace, and have come to realize the *entente cordiale* by intermingling our national virtues, the love of civil, religious and political liberty, the strength of wisdom, the poetry of effort, the chivalrous generosity and the thirst for justice and high ideals, notwithstanding the misapprehensions of those who know us not.

and the vaporings of the designing irresponsibles who would wish to convey an altogether different impression.

We are a happy, contented people, obedient to the laws of God and man to the best of our ability and conscience, and I may add, in the name of all these people, the citizenship of Quebec, as well as your immediate colleagues in industry, I again bid you welcome, and sincerely hope that you and your ladies will enjoy your visit to our city. (Applause).

THE PRESIDENT:—Mr. Mayor, Mr. Vandry, Ladies and Gentlemen; I am going to call upon Mr. W. K. McNaught, to acknowledge on our behalf your very kind welcome.

MR. W. K. McNAUGHT:—Your Honor, Mr. Chairman, Ladies and Gentlemen; I could have wished that the honor of making a suitable reply to the eloquent addresses of welcome to which we have just listened had fallen to some more fitting person than myself. However, on behalf of the members of the Canadian Manufacturers' Association, I thank you sincerely for your hearty and generous reception.

It is particularly gratifying to the members of our Association, especially of the Province of Ontario and the Great West, that this annual meeting is being held in the old and historic city of Quebec.

Canadians are proud of Quebec. The very name of your ancient city recalls memories of which both French and English speaking Canadians are alike proud and which neither would wish to forget.

When that rugged adventurer Jacques Cartier made his memorable voyage up the noble St. Lawrence in 1534, he little dreamed that the mighty river which flows past your citadel would be the future highway for the commerce of half a continent, a territory twenty times larger in extent than the land of his birth.

Or when in 1608, Champlain planted the fleur-de-lys upon the heights of Quebec and founded the colony of New France, he had no premonition that he was founding a colony which was destined to exercise such a mighty influence upon the future of a Dominion of British people, and to which their descendants would be united in the closest and most endearing bonds of national brotherhood.

Sirs, if the stones of your historic walls could speak they would tell the story of Champlain, of Frontenac, of LaSalle, of De Salaberry, and of many other men of note who have not only trodden your streets but have had no small share in moulding the early history of this great and growing country.

But interesting as these memories are, they pale before the historic struggle which took place before your walls in 1759, when the immortal Wolfe fell in the moment of victory, and Montcalm, his brave and chivalrous opponent, received such injuries as to cause his death a few days later. So thoroughly have the wounds caused by that life-and-death struggle been healed, that the memory of those two great leaders has not only been perpetuated by a common memorial, but it is held equally sacred by every true Canadian whether of French or English origin.

Sirs, the result of that memorable struggle which changed the political destiny of the northern half of this continent, and the consequent fusing together of these two great races, has been the building up of our young and vigorous Canadian nation, a nation of brave and loyal men and of noble women, who under the Union Jack are enjoying the fullest measure of civil and religious liberty, a nation having just and equitable laws which are fairly and honestly administered, a nation with potentialities so vast as to be almost beyond belief, a nation possessing a boundless heritage, whose natural resources and the energies of whose people are so great as to ensure it a place in the van of nations yet to be.

But, sirs, the meeting of our Association in your city also emphasizes the fact that while Quebec is rich in historic memories, it is even more fortunate in the possession of energetic and up-to-date merchants and manufacturers. The fettered commerce of the olden days has given place to the progressive policy of the present era, under which your great city is advancing by leaps and bounds in wealth and influence, and keeping step with the triumphant progress of the other industrial centres throughout the Dominion.

Providence has dowered your fair city with great natural advantages. Situated as Quebec is, practically at the head of tide water, it must always remain an important factor in the handling of the ocean-borne commerce of the Dominion.

In addition to your marvellous scenery which is beautiful beyond compare, nature has placed at your very doors an almost illimitable supply of cheap water power, a supply sufficient to



MR. G. A. VANDRY

(J. Arthur Paquet.)

Chairman Quebec Branch.

meet the requirements of your ever expanding industries for many years to come.

I have no doubt whatever that the well-known enterprise of your citizens will secure the very fullest benefits from these great natural advantages, and not only place but keep your city in the van of national and civic progress.

And now, sirs, while conveying to you our sincere thanks for your kindly and generous welcome, I desire also to leave with you this message of our manufacturers all over Canada: that they wish for your city, your province and your people not only every civic and national right which an enlightened citizenship can bestow upon a free people, but also every blessing which can conduce to your temporal and spiritual prosperity.

Once again, sirs, on behalf of my fellow manufacturers, I thank you for your kindly welcome and your princely hospitality. (Applause).

MR. VANDRY:—Mr. George, the President of the Association, will now deliver his annual address.

THE PRESIDENT'S ANNUAL ADDRESS.

THE YEAR'S COMMERCIAL AND MANUFACTURING PROBLEMS ABLY REVIEWED BY MR. W. K. GEORGE.

Gentlemen of the Canadian Manufacturers' Association:

It was truly a happy inspiration which led the hospitable manufacturers of this historic city to invite our Association to hold its 34th Annual Convention within its gates—and truly, too, is this opportunity of visiting the ancient capital appreciated by every one of their guests.

"See Naples and die; see Quebec and live forever," is the realistic way in which a well-known romance is introduced, and we agree with the author when later he says, "Till men see Quebec, they will not fully realize the meaning of the term 'God's footstool.' It is a land worth living for."

So much of the early history of our country is wrapped around this old town that it is dear to every Canadian. Founded on this magnificent site by the great Champlain just 300 years ago, the Citadel rock has since stood and stands to-day to typify the strength and solidarity of our country and our people. Almost every foot of land here has affixed to its title some chapter of history or romance, never to be effaced, but from year to year becoming more and more a hallowed tradition of Quebec and of Canada.

Here has been our most fertile field for history. For years the scene of bitter conflict—for generations now the scene of peace, and surely nothing is more fitting than that old Quebec, with strife a thing of the past, should be the centre from which is emanating the blending of our two races. All Canadians rejoice to see the people of Great Britain and of France working now harmoniously together, joining in an "entente cordiale" which should be an all-powerful influence for good in the world's diplomatic relations of the 20th century. We, in Canada, have shown our parent countries that such a union is not only possible, but happy. Friends they have been. In the city of my forbears I saw on the old castle wall the Lion of Scotland, surrounded and protected by the Fleur-de-Lis of France. Friends they are to-day, and friends we pray they ever will remain.

Canada has this year been pleased to welcome His Excellency, Earl Grey, as the representative in Canada of His Gracious Majesty, the King. His Excellency was no stranger to Canadians, as his broad-minded statesmanship and splendid abilities have already been recognized throughout the Empire. It is extremely gratifying to note the great personal interest which their Excellencies have already manifested in Canada and Canadian affairs, and their visits to various Canadian centres have been the cause for much satisfaction. We all hope that His Excellency's

stay in Canada will afford him both pleasure and satisfaction, and that during his term of office it will be his privilege to see a great development in our young Dominion.

It is fitting that on this occasion we, of the older provinces, should extend our congratulations to Saskatchewan and Alberta, these two new sister provinces, each an empire in extent, which have been carved out of that great North Land. We expect much from the Canadian West, and we hope that with the added powers and responsibilities of local government that the provinces will readily equip themselves and be prepared for the great development that is surely theirs.

Within a few days after the formal organization of these new provinces the first sod of the Grand Trunk Pacific was turned at Fort William. We note with satisfaction that contracts for part

of the western division of the road have already been let and that the work is going to be vigorously pushed ahead. The new road will not only help to solve the great transportation problem of the West, but it is going to open up for settlement another country equal in importance to that traversed by our first transcontinental railway, the Canadian Pacific.

Canada can take credit for enterprise in steam as well as in rail transportation. It is interesting to remember that in 1833 in this city the steamship "Prince William" was constructed, which was the first vessel propelled by steam to cross the Atlantic. This year, the Allan Line are to be commended for their enterprise in having added to their fleet the "Victorian" and the "Virginian," two beautiful ships, and the first of the turbine type to be put into commission for trans-Atlantic service.

Since our last Annual Meeting Canada has enjoyed a year of prosperity—a year blessed with exceptional harvests, a marked development of our country, and a satisfactory increase in our population. Our manufacturers on the whole have a favorable year's business to re-

port. Some industries have suffered severely through an unequal competition, and we look to the present Tariff Commission, with its thorough revision of the tariff, to so equalize conditions that our manufacturers will have a fair chance to supply their own market. The present situation is due in part to satisfactory trade conditions in the United States and the operation of the anti-dumping clauses of the Canadian tariff, which together have resulted in a lessening of slaughter competition.

Trade Returns.

The figures showing the total amount of our foreign trade have not materially altered. Such changes as have taken place,



MR. W. K. GEORGE,

(Standard Silver Co., Limited),

President, Canadian Manufacturers' Association, 1904-05.

are, however, not encouraging, showing a falling off from the year previous of seven and a half million dollars. Our exports are less by about ten million dollars, which is largely accounted for by a decrease in the exports of agricultural products amounting to seven million dollars. On the other hand, our imports have increased by two and a half million dollars. This discrepancy between exports and imports reveals a condition which is not healthy. A young country like Canada, recognized as an exporter of natural products, should not have to report for its year's business that its imports exceeded its exports by fifty-eight millions of dollars. It is impossible to cover up the seriousness of this debit balance by any economic theories. It must be settled for by Canada sooner or later, and the gravity of the situation becomes apparent when we realize that this sum is equal to one-half the cost of the construction of the Grand Trunk Pacific Railroad. I trust, however, that with the magnificent harvests of this year and with a thorough revision of our customs tariff at an early date, that our trade returns will rapidly become more favorable.

It will not be amiss to remind you once again that the estimated output of our factories amounts to about 650 millions of dollars annually, and that through them employment is furnished to at least 450,000 of our people. These figures emphasize very clearly the important position which our manufacturing industries hold in the commercial life of our country, and how necessary is their successful operation for our general welfare.

It is a matter for congratulation that our manufacturing industries are gradually making headway in their export trade. Last year the manufactured goods as classified in the trade and navigation returns showed an increase of about \$1,125,000 over the previous year. I have prepared further figures to show just what part is played by the manufacturers in the export trade of Canada, and I believe that they will surprise you. I have taken, in addition to those articles included in the trade and navigation returns, sawn lumber, canned and cured meats and fish, cheese, flour and cereals, because I contend that these should be legitimately classed as manufactured goods. They are all the products of factories employing men and machinery, and, taken with the other manufactured goods, the value exported amounted to \$102,000,000, or about 54½ per cent. of the total export of Canada.

The Value of the Home Market.

I am convinced that Canadians appreciate as they never did before how important the manufacturing industries are to the country. From the Atlantic to the Pacific there is a pronounced preference for goods "Made in Canada." This preference is not merely one of sentiment but it is the result of careful thought on the part of our people. They have begun to realize that it is the manufacturers who are the main stay of our cities and who are thus providing for our farmers their great consuming markets. Too often have our own people, the farmers particularly, failed to appreciate the value of the consuming market at home, in comparison with the really small percentage of our farm products which we send abroad.

All the grain, wheat, including flour, corn, oats, barley and peas, exported from Canada for the twelve months ending June, 1905, was 28½ million bushels. This was about one-third of the wheat grown in the great North-West. Let us assume for a moment that all the grain exported from Canada was grown in the North-West, then our home market was sufficient to consume twice as much of the western crop as was exported, and in addition the 165 million bushels grown in Ontario, the 40 million bushels of Quebec, the 5½ million bushels of each of the Provinces of Nova Scotia, New Brunswick, and Prince Edward Island, and the 2 million bushels of British Columbia. I am unable to obtain complete statistics since the last census year 1901, but in that year the total value of all the agricultural products of Canada was \$363,126,384. Of this large amount 78% was consumed by the Canadian home market. I ask you

now, is it not better for the farmer to have competition and demand at home for home consumption, than to have his product, whether it be grain, butter, eggs, beef, or whatever it may be, enter into competition in foreign markets with the products of the world.

The Government has for some time recognized the importance of assisting the development of Canadian export trade by appointing commercial agents to foreign centres. This service has been considerably extended and developed during the past year, and is becoming of more practical benefit. While we recognize fully the necessity of proceeding cautiously, there are many centres, particularly within the Empire, where the right stamp of men could be used to the greatest advantage, and we trust that our Government will extend the service as rapidly as possible. In some centres definite results may not be quickly apparent, but, on the other hand, we all know that any export business which we have secured has been of a gradual growth.

Immigration into Canada is increasing and the immigrants are for the most part desirable. It is to Canada's advantage that settlers should not come to us so numerous that we are unable to assimilate them to our laws, language and institutions. Our enormous harvest in the North-West will be a great attraction, and we may expect the 146 thousand of 1905 to be increased to 175 thousand in 1906. In some respects, however, Canada can afford to go slowly and care should be taken to attract only those emigrants that are best suited to Canadian conditions.

For the right class of immigrants many opportunities are offered for profitable employment in Canadian factories, and we believe that with the increase of our population and the great development we are now experiencing, the labor necessities of our factories will become more pressing.

To unite our comparatively small population in provinces so scattered we require to keep ever before us the national rather than the provincial outlook and in this connection I regret to have to refer to the unpatriotic policy that has been adopted by our Provincial Governments in passing legislation imposing taxes on all Canadian companies incorporated outside of their respective provinces, and by Prince Edward Island and British Columbia in taxing non-resident Canadian commercial travellers. If there is one principle our great Dominion should stand for it is that intercourse between the several provinces should be free and untrammelled, and that no province should pass any legislation which would act as a barrier to the freedom of inter-provincial trade. The more trade the provinces do with each other the closer together will their respective interests be drawn. I sincerely hope that our local Governments will soon see that such legislation is decidedly un-Canadian and that they will take steps to repeal it.

The Tariff Situation.

Now I wish to refer briefly to those particular features of the work of the Dominion Parliament which are of the greatest importance to manufacturers, namely, tariff and labor legislation. At the Halifax Convention of 1902, what is known as the Halifax tariff resolution was passed, which stated "That in the opinion of the Association the changed conditions which now obtain in Canada demand the immediate and thorough revision of the tariff upon lines which will more effectually transfer to the workshops of our Dominion the manufacture of many of the goods which we now import from other countries," and later the same resolution declares in favor of a substantial preference for the different parts of the British Empire. This resolution has been kept to the fore by the Association ever since it was passed; the changed conditions manifest in 1902 are equally so to-day, and it gives us much satisfaction to know that a Government Commission is now taking evidence for the purpose of thoroughly revising the tariff. We believe that by a just, wise and careful revision, calculated to meet present day conditions and necessities, an immense impetus will be given to our industrial life,

which will be beneficial to all and detrimental to none of our people.

The attitude of the Canadian people to-day gives us the greatest cause for satisfaction. No longer is the tariff made a question of party politics, nor is it looked upon as class legislation. To-day, we are thinking, not individually, nor locally, nor provincially, but nationally. Practically all Canadians now recognize in the tariff a business and not a political proposition, and believe that if we wish to build up our country, if we wish to attract capital and industry, we cannot do so by permitting the manufacturers of the United States or other countries to make for us the goods which could just as well be "Made in Canada."

We believe that the great majority of Canadians now appreciate the justness of our position, and recognize the necessity and commercial wisdom of a protective policy for our young country. We are blessed with boundless stores of natural resources, the exploitation and development of which are simply awaiting a fair and reasonable chance of success in competition with the



MR. R. P. McLENNAN,
(McLennan, McFeeley & Co., Ltd.),
Chairman B.C. Branch.

older, better established, or more favorably situated industries of other countries.

It is useless to endeavor to conceal the fact that the large proportion of the goods we would shut out, are made in the United States. The people of the Republic to the south are a great people, their country is a great country. They have lived for themselves, and by their policy of protection have made wonderful progress. We, on the other hand, have stood by and watched them increase their tariff year by year, shutting out almost completely the products of Canada; we, too, have watched them year by year taking a greater advantage of our lower tariff, and sending more and more of their goods to Canada, thereby retarding the development of our industries. Last year we imported from the United States goods to the value of one hundred and sixty-two million dollars, or over 62% of our total importations. This enormous sum was about equally divided between dutiable and free goods. The increase in dutiable goods over 1904 was about six million dollars, and about twenty-three million dollars greater than in

1902, the year of the Halifax resolution. The total value of dutiable goods imported for the last fiscal year is one hundred and fifty-seven million dollars, and I am safe in saying that from 65 to 70 million dollars worth of these goods could be made to advantage at home.

The United States recognizes in Canada a market too valuable to lose, and we now hear of much agitation in that country for a reciprocity treaty. Gentlemen, the day for such a treaty is not now. The United States has achieved the very results which we in Canada are striving for, and by its policy of protection has established its industries, and we can do nothing better than follow the example so well set us, until we achieve something like the same results. Do not mistake me as advocating a tariff similar to theirs. What we want is one adapted to the needs and conditions of our own country, and one which will lead to the establishment and development of our own industries. I feel that to-day the people of Canada are unanimous in demanding a tariff that will prevent the United States from being able to sell in Canada the products of its farms, forests and factories on almost equal terms with the products of our own people.

The Tariff of 1906.

The Finance Minister of Canada has announced that the new tariff would be one of three schedules. This will give an opportunity to have a sufficiently high tariff against unfriendly tariff countries, and an opportunity also to give to the British Empire a preference less hurtful to Canada and more advantageous to the Empire. The Association has declared itself in favor of a policy of preferential tariffs and believes in making this policy effective, notwithstanding the criticism of those who refuse to understand the simple, reasonable and patriotic stand we have taken. Our position is briefly this. We desire to make in Canada everything which we can advantageously produce, and to buy our surplus requirements as far as possible from British sources. What could be more simple?

The Tariff Commission has been appointed to revise the tariff. It is not probable that there will be another general revision for some years, so I cannot impress upon you too strongly the importance of laying your requests before the Commission. And further, let me say to you that your requests should be conservative and the reasons you advance should be conclusive. I am hopeful that the new tariff will not only properly protect our industries, but will be an incentive to the establishment of many new ones.

Labor Legislation.

The labor unions have again been aggressive in advocating class legislation, and have been continuously represented at Ottawa during the past session. Up to the present time we have not advanced any measures, but have confined our efforts to checking such labor bills as we considered detrimental to the best interests of the country, and it is gratifying to report that our efforts have been successful.

The outlook for manufacturing in Canada is promising. Our home market, always to be our best market, is rapidly expanding; the relations between employers and employees are fairly satisfactory, and we look forward to a still greater measure of co-operation between the great interests represented by labor and capital in this country.

Canadian Water Power.

There is one feature which will greatly facilitate our industrial development and which as yet has not received the attention it deserves. I refer to the great natural asset we have in our water powers. We hear more at present of the development at Niagara than in any other particular part of the Dominion; but Niagara is only a fall on a more majestic scale than the hundreds, yes, thousands, that are everywhere scattered between the Pacific and the Atlantic. We are only beginning to appreciate their value.

The development which will follow the harnessing of this power is impossible to estimate. Experts have concluded that in the valley of the St. Lawrence alone there is a hundred million horsepower available, and there flows over Niagara Falls sufficient water to generate more power than is used on the 550 warships of the British navy. It has been carefully estimated that within 50 miles of Ottawa, 900,000 horsepower can be developed, and that the Lake St. John district in Quebec has upwards of 700,000 horsepower. The same conditions apply in almost every part of the Dominion. In Switzerland water power is described as "white coal," and I am satisfied that the day is not far distant when Canada's white coal will be a more valuable asset for the Dominion than Pennsylvania's black coal is for the United States.

Our Foreign Relations.

With the expansion of our commerce and with growing business interests in every part of the world, Canadians must take a deeper interest in international affairs. But before touching on the conditions in the Empire which I shall more particularly refer to, I wish to add my prayer of thankfulness that peace has been re-established in the Far East. This war has been a sad story, and all civilization rejoices in its close.

Throughout the Empire the general prospect is hopeful. The conditions in the tight little islands themselves are reported brighter than they have been for some time. South Africa has now become settled, the enormous stocks of goods accumulated during the war have been distributed, and the market has become a more desirable one for our manufacturers to cultivate. In Australia, the long drought has at last been broken, and while it will take some time to recover the enormous losses of live stock, business has already improved. The British West Indies are enjoying a more prosperous condition than they have experienced for the past ten years. The European bounties on beet sugar have been reduced and the price of sugar has increased so that at the present time it can be produced at a profit. Just here it is satisfactory to note that while in 1902 we imported 23,230 short tons of sugar from our sister colonies, the West Indies, in the year just closed we have consumed 125,120 tons of their sugar. In New Zealand, business is in a satisfactory condition—so throughout the whole Empire this is truly a year for which we have great reason to be thankful.

South Africa and New Zealand have adjusted their tariffs so as to give Canada a preference. In South Africa the preference places certain articles now dutiable at 2½% on the free list, and on other articles now dutiable at an ad valorem rate, a reduction of 25% of the tariff is made. In New Zealand the preference is made effective on certain enumerated articles by increasing the general tariff against foreign countries. We were hopeful that the Canadian preference would serve as a practical invitation to the other parts of the Empire to reciprocate, and already, with our preference in force only a few short years, two sister colonies have followed our example.

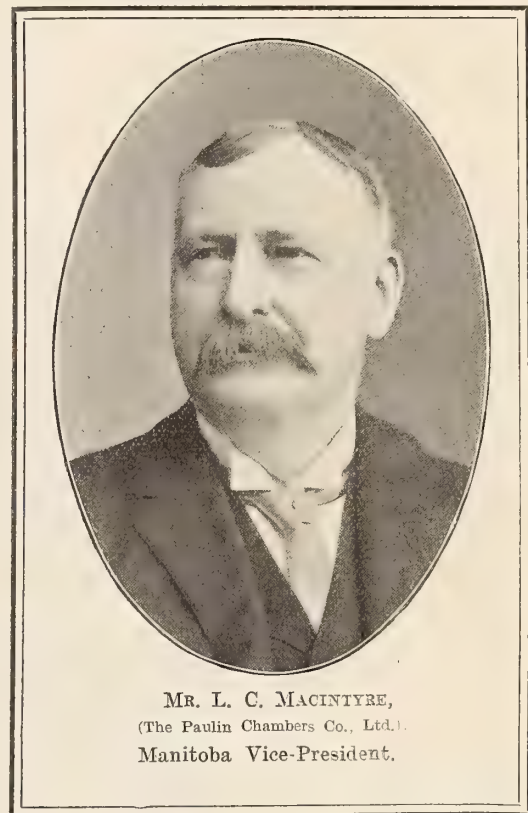
On account of the great differences in local conditions which exist, and which probably ever will exist, in the widely separated portions of our Empire, we do not believe in the feasibility of an Imperial Zollverein, but we do firmly believe that each part should wherever possible adjust its tariff so as to give to the goods of the Empire a preference over the goods of foreign countries.

Canadian Steamship Lines.

I desire now to refer to the increasing necessity for a satisfactory fast Atlantic service. It is most unfortunate that at present the bulk of Canadian freight and mails is carried through United States ports. This is particularly lamentable with regard to traffic with Great Britain. It is admitted that the shortest route from Great Britain to America is via Canada, and yet we do not grasp the natural advantages of our position. The Canadian Government has for many years subsidized steamship companies for a mail service, from Montreal to Liverpool in the summer, and from Halifax to Liverpool in the winter, but notwithstanding this, at least 80% of Canadian mails and passen-

gers go and come by New York. The unfortunate impression created abroad by this condition is that Canada is a hinterland, shut off from the Atlantic seaboard by the United States.

This is the kind of advertisement that Canada cannot afford to have continued. It can and should be rectified. If the 240 thousand dollars subsidy paid in 1904-05 for our British service is not sufficient to give Canada a service good enough for Canadian traffic, then I believe, and I am sure that the people of Canada will agree that the Government should at once increase it so as to make it worth while for a steamship company to give Canada a service between her eastern ports and Great Britain, which would not only carry Canadian passengers and mails, but would be so fast and so satisfactory that many United States passengers and much of the United States mail would be delivered through Canadian ports. The beneficial advertisement which Canada would thus obtain, as compared with the detrimental advertising she is at present receiving, would be worth much more to the country than the amount of the increased subsidy.



The total amount paid in subsidies by the Dominion Government in 1904-05 was 835 thousand dollars—not a sum to frighten us. We welcome the new lines, Canada to France and Canada to Cuba and Mexico. We feel sure that both of these will justify their existence. We learn with satisfaction that more frequent sailings are to be given by the Canada-South African line and from St. John and Halifax to Jamaica. Notwithstanding these improvements, which for one year's work must be considered as very creditable, Canada is still calling for more ships.

There are three lines along which our needs are greatest. I have already mentioned the first, which is a fast Atlantic service. The next in importance is a service to Australia and New Zealand from Atlantic ports. Canadian business is becoming well established in both of these colonies, but it can never grow as we would like to see it so long as our goods have to be carried by rail across the continent or subjected to the unsatisfactory features connected with New York shipping. The third is the service to the West India Islands and British Guiana. Our service now is what the British and Canadian Government contracts

call for, but the contracts are entirely unsatisfactory. In brief, the boats are too slow, the stops too numerous and the delays at both ends of the trip quite unjustifiable. I hope that my successor in office may, when addressing you one year hence, be able to refer happily to the realization of these improved conditions.

The British Excursion.

Just a year ago this Association, assembled in Annual Meeting, expressed its unanimous desire that an excursion to Great Britain should be organized for the summer of 1905. I feel happy in saying to you to-night that that excursion was organized, that it is now a part of history, and that it has been in every way a credit both to the Association and to Canada.

A party numbering two hundred and seventy-eight, and representing the Dominion from sea to sea, availed themselves of the opportunity offered to visit the Motherland. I think I am safe in saying that those who were fortunate enough to compose the party had no conception of the warmth of the welcome awaiting them, or of the hospitality which was to be showered upon them in so many ways.

But this I must say, that none of them could visit the land of their fathers on so unique an occasion, and experience what they did, without feeling prouder of their heritage as British subjects, and of their citizenship within the Empire. The charm of British countryside and landscape; the magnificence of British industry, from which have evolved those wonderful producing centres; the wealth of commerce, which makes cosmopolitan London the capital of the world; the old historic associations which gather around a thousand spots, and which are so dear to Britons the world over; and over all these, the warm-heartedness of the British welcome, whether bestowed by His Gracious Majesty, the King, or by the masses in the great cities, these are the impressions which for Canadians can never fade.

The warmth of the welcome extended to us was not confined to Great Britain, but in Paris, the government, the city and the Chamber of Commerce, welcomed us with a cordiality that could not be exceeded. We were greatly pleased with our visit to France, because we believe that in some small way we assisted in strengthening the entente cordiale now happily consummated between England and France.

Benefit to Canada.

And if our own members were benefitted by what they saw, be assured that it was also to the great advantage of our country.

Everywhere the party went they aroused the greatest interest in Canada and her progress. Her agriculture, her railways, her factories, her mines, her forest wealth—indeed, her glowing possibilities in every direction—were the universal topics of interest. Since the close of the tour there are many evidences of practical results. Canada is going to have more of the better class of emigrants from Great Britain. She is going to sell more goods to, and, I hope also, buy more goods from, the British people, and,

what is more important, she is going to receive for the development of her manufacturing industries a larger share of British capital than she has ever received in the past. All of these results mean much to Canada and to the Empire.

Imperial Policy.

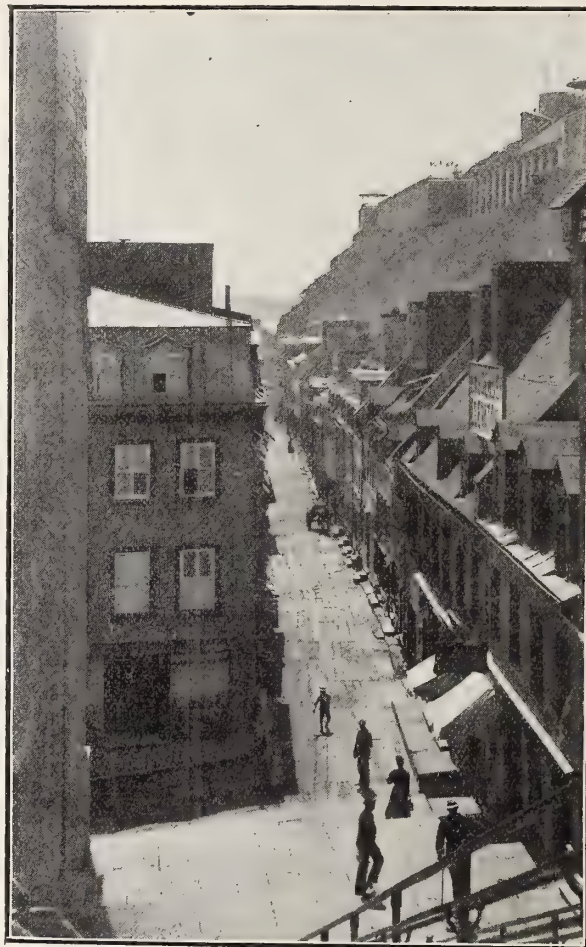
Further, I may say that our visit has resulted in a vastly clearer understanding on the part of the British people in reference to our position on tariff matters and our insistence on the necessity of protection to our industries. We refrained from taking any part in political controversies. I stated, however, plainly and frankly, the policy of this Association, that the Canadian market should as far as reasonably possible, be supplied by our own manufacturers, but, above and beyond that, our aim was that our surplus requirements should, with the same reasonable judgment, be purchased from British sources.

I am glad to say to you now that never once during the entire tour was the wisdom or reasonableness of our position debated. Both political parties in England, so far as I can learn, acknowledge the wisdom of this policy for Canada, and also, I believe, recognized its advantages from an Imperial standpoint as one designed to build up and develop our portion of the great Empire.

We frankly declared the necessity of protection for our industries and expressed ourselves in favor of the preferential tariff along the lines laid down in our Halifax resolution. Our position was understood and acquiesced in by Hon. Mr. Chamberlain, who is leading the preferential movement in Great Britain.

We look forward to the day when there will be a closer intercourse, a more undivided interest and a greater trade between the Mother Country and ourselves. If our excursion has contributed in the smallest way to such results as these, it has not been in vain.

As the official head of the visiting party, I desire to record our keen appreciation for the many kindnesses which were showered upon us, both in the Old Land and in La Belle France.



LITTLE CHAMPLAIN ST., QUEBEC.

The Burden of Defence.

Wherever we went in England we heard the opinion expressed that the Canadians should not allow the people of the British Isles to bear the whole expense of the Imperial navy, and we could not help feeling somewhat ashamed. Surely no self-respecting Canadian will argue that the British taxpayer should bear the burden of defending Canadian trade and commerce, and surely no intelligent Canadian will argue that Canadian trade and commerce needs no defender. The history of every nation worthy of the name proves to the contrary. We must face this question squarely and assume our responsibilities or else we must cease boasting of our prosperity and of our dawning nationhood, and acknowledge ourselves a dependent colony, pure and simple.

We must recognize that defence is necessary and we must endeavor to relieve the British taxpayer of that proportion of his burden which is fairly chargeable to us.

There is no doubt, that if Canada were an independent country, we would be obliged to support a navy. The little kingdom of Holland, with an area less than half as great as our province of New Brunswick, and a population less than that of Canada, had in 1902 129 men-of-war, 32 of them ironclads. Sweden, with an area about half as large as the province of Quebec, and with a population also less than that of Canada, has 68 warships, including 23 ironclads, and Norway, a still smaller country, with about half the population of Sweden, has a navy consisting of 55 warships. Is it not time that our vast Dominion, with a population of about six million prosperous people, should share the responsibility of defending that great Empire to which we are all so proud to belong?

I am not advocating that Canada should at once make a contribution to the general maintenance of the British navy, but I am satisfied that the time has arrived when she should begin to assume the responsibility for the defence of her own coasts.

Work of the Association.

I have not yet touched to any great extent upon the work of our own Association. The Executive Council and Standing Committees which you, a year ago, entrusted with the responsibility of office, have been untiring in their efforts to work for you and for the Association. These Committees have reports to present to you at the various sessions of the Convention—reports which will convey, better than any words of mine, some idea of the magnificent results of the year's work. Furthermore, I believe that the Association is more thoroughly understood by the people of Canada than ever before. It is recognized as a business organization. Canadians have seen it demonstrated, and I believe have been convinced, that the aim and object of the Association is to make Canada a nation—not a nation of manufacturers alone, but a nation of happy and contented people, each recognizing that the existence and prosperity of one depends on the existence and prosperity of the other.

Fire Insurance.

Only two features of Association work will I refer to and these but briefly. During the year we organized an Insurance Department. My predecessor in office spoke in no uncertain terms concerning the importance of fire insurance in its relation to the business of our manufacturers; during the interval there has been little or no amelioration of the burdensome conditions that then existed.

For several years the experience of the fire insurance companies is understood to have been profitable in respect to manufacturing risks, and if so, it must be apparent to all who follow the course of events that since the Toronto fire the profits on manufacturing risks have been abnormally high. We therefore believe the attitude we have taken on the question of the high prevailing rates to be in harmony with the facts and fully warranted by conditions.

In the report of the Insurance Department to be submitted to you, reference is made to the desirability of maintaining in our own office accurate statements showing the experience of the companies, from year to year, on manufacturing risks. This is a task of great importance to our members, for we should occupy a position of decided advantage, in agitating for reduced fire rates, if we had authentic and reliable data, covering a period of years. The general insurance phraseology urged in justification of increased rates is that "your class of risk does not pay," and we are altogether powerless to present any other view for the lack of proper information. Fire insurance is a question of indemnity, plus expenses, plus a reasonable profit to the companies for the capital invested, and there are few who would seek to deprive the companies thereof, but with the general impression that they are now and have for some time been making excessive profits out of manufacturing risks, it is highly desirable that we should be more surely advised in this respect.

The Insurance Department purposes to utilize its machinery in seeking to reduce the fire waste in manufacturing risks so that there will follow corresponding reductions in rates. It hopes to do this by a systematic and regular inspection of risks viewed alone from the standpoint of the manufacturers, and by improvements in the physical construction of and private protection for the properties insured.

My predecessor, in his annual address, drew attention to the action of the National Association of Manufacturers of the United States in the appointment of a committee working on similar lines to those adopted by us. That Association, our members will be glad to learn, at their Annual Convention at Atlanta, in May, approved of the organization of an Insurance Department along parallel lines to those upon which we are ourselves working.

The Insurance Department is to be commended for the cautious, conservative policy they have adopted and which they propose to work upon during the ensuing year. It may occur to some of our members that the present fire insurance rates constitute such an intolerable burden that a more aggressive policy should have been pursued and more drastic measures recommended, but due reflection will, I am sure, lead to the conclusion that if the committee has erred at all, it has been on the safe side.

I trust you will give careful attention to the report of the Insurance Committee, and that the excellent record of the past six months will lead to your active interest and co-operation in the work they are undertaking on your behalf.

Transportation Department.

The other department in which we have an expert in charge, and which for the first time has a full year's report to present, is the Railway and Transportation, and in no department has the national influence of the Association been more marked. The conditions in Canada are unique. With an enormous area and comparatively few railways, we have been passing through what might be termed a critical point in our development. In the improvement of the conditions, the whole country is indebted to the Railway Commission. Railway companies and shippers alike may present their views with the greatest freedom, and the decisions reached show that the Board of Commissioners has a wide grasp of the necessities of the time.

Many of these decisions secured through the efforts of our Association affect the trade of the whole country and are invaluable precedents in indicating the relations which should exist and which are now being brought about between the railway companies and the Canadian public.

The progressive step taken by the railways in the reorganization of the Canadian car service is to be commended in the highest terms, and the desire on the part of the railways to meet the needs of the shipper, to remove causes for complaint, and to improve the conditions generally, indicates a co-operation which will benefit the whole community.

It must be gratifying to the members of the Association to know that in the good results secured, the Association has played a prominent part.

It has been our desire to foster the most cordial feelings between the railway companies and our own members, and to show proper consideration for every interest, a desire which I am pleased to say has been abundantly fulfilled.

For the work of the other committees, time compels me to commend to you their reports for your most careful consideration.

As a whole, the Association has had a banner year. Our membership has increased wonderfully; the prestige of the Association has been greatly enhanced; the finances are in a healthy condition; and when the business of the convention is finished, I will hand over to my successor the cares and the great honor of office with the satisfaction of knowing that the Associa-

tion is truly sharing in the development and growth of our great Dominion.

I cannot close this address without referring to the splendid manner in which our staff has worked during the past year. No word of mine is needed to add to the esteem which our members already bear towards our General Secretary, Mr. Younge, but perhaps you will permit me, as one who has come into almost daily intercourse with him during the past three years in the work of the Association, to bear my testimony to the able, enthusiastic and whole-hearted manner in which he has devoted his time and his talents to the services of this Association. He has been loyally and splendidly assisted by all of his staff, and I want to especially mention our Assistant Secretary, Mr. Stewart, and to compliment him on the very capable way in which he handled our Parliamentary work at Ottawa during the late session, and the satisfactory manner in which he conducted the work of the Association during Mr. Younge's absence in England.

The reports of our department managers speak for themselves and I can assure you that so long as our Association can command the services of such men, I have no fear for its continued success.

In laying down the cares of this most honorable office I want to thank the members of the Association for the many kindnesses which they have shown me. While the office has carried with it both work and responsibility, the remuneration which has come in the shape of friendships made and which I hope ever to retain, has repaid me a thousand fold.

In conclusion, gentlemen, I would like you to try and picture to yourselves the future which lies before this Canada of ours. I feel how impotent my words are to paint the picture which my mind contains. But think of what our possibilities are. Our area so vast that many of the great Empires of the world to-day would be lost in it. Our soil gloriously fertile, and our natural resources almost illimitable.

We are standing to-day on the threshold of a mighty development in which our geographical position will be a factor of no mean importance. Across Canada will lie the shortest route from Europe to that mighty East which is just preparing to shake itself free from centuries of Oriental exclusiveness. An enormous trade with the outside world will soon be in progress, and, with our advantageous routes, Canada will undoubtedly become the highway of the nations.

Surely, when we consider even these features alone it is not difficult to realize that Canada's due destiny is to become a great and a prosperous country.

We cannot hope to live to see the full development, but so much of the future depends upon the present, that it behooves each and every one of us to think and to think hard on the great question of how we can lay the foundation so as to secure the best development of the glorious heritage which is ours; so that our country will not only become great and prosperous, but peaceful and happy, redounding to the glory of God and to the good of man. (Applause.)

MR. AMYOT:—Gentlemen, on behalf of the members of our Association I would move a vote of thanks to our President, Mr. George, for the manner in which he has given assistance to this country and to its industries. It is well worthy of your attention, and worthy of the attention of the citizens of this country. His remarks have certainly embraced a great many things which are of importance to this Canada of ours. Mr. George has been a very able President of this Association, he has multiplied himself in several ways, and I can assure you, ladies and gentlemen, that during our visit to England which lasted nearly two months, both in London and through the provinces he was a great honor to this Association. (Hear, hear). His speeches almost every day numbered two or three, and he seemed to be restless when he didn't have something to say. (Laughter).

MR. LLOYD HARRIS:—Ladies and gentlemen, as an Ontario man I simply wish to add my testimony to that of my good friend Mr. Amyot, of Quebec. We in Ontario have been very

proud indeed of the President of the Association for the past year. Mr. George has had duties devolving upon him which have been very difficult and he has carried them out with honor and dignity not only to the Association but also to Canada, and I therefore have very great pleasure indeed in seconding the resolution moved by Mr. Amyot.

MR. BALLANTYNE:—Ladies and gentlemen, you have heard the resolution that is proposed to our worthy President, moved by Mr. Amyot and seconded by Mr. Lloyd Harris. Will you please signify in the usual way.

The motion was carried with applause, followed by the singing of "For He's a Jolly Good Fellow."

MR. GEORGE:—Mr. Amyot, Mr. Harris, ladies and gentlemen, I am certainly not going to inflict anything further upon you to-night. I thank you very heartily and from the bottom of my heart for the kindly way in which you have received the vote of thanks which has been proposed to me. I thank you very sincerely. (Applause).

Three hearty cheers for the Mayor and the Aldermen of the City of Quebec, and three more for the Quebec Branch of the Association, marked the close of the evening's formalities, after which supper was served and dancing indulged in to a late hour.

TUESDAY, Sept. 19th, 1905.

The proceedings were opened at 10 a.m. by the President calling upon Mr. Burton to read the report of the Insurance Committee.

REPORT OF THE INSURANCE COMMITTEE.

MR. P. H. BURTON:—The Insurance Committee submit their report under three separate and distinct headings, viz.:—

1. Organization of the Insurance Department.
2. Work of the Department since its Organization.
3. Outline of Future Plans and Policy.

In this way it is thought the members will get a clearer view of the department as at present constituted, of the results so far accomplished, and of the general purposes and plans recommended by the committee for future activity.

1. The Organization of the Insurance Department.

At the last annual meeting, the committee that for some time previously had been enquiring into the subject of fire insurance, presented a very complete report showing the results of their investigation and presenting a scheme for the creation of an Insurance Department. The time at the disposal of the convention being somewhat limited, the discussion that followed was necessarily curtailed and no definite pronouncement was made upon the recommendations contained in the committee's report; action was, however, taken as expressed in the following resolution:—

"That the Executive Council of the Association be authorized to consult the branches of the Association and to appoint a Fire Insurance Committee, as outlined in the report, to prepare a plan for fire insurance and to submit the same to the Executive Council for approval, no plan to be considered which in any way affects the funds of the Association."

Carrying out this resolution, the Executive Council appointed a committee of twenty-one members, which met on December 15th, 1904, carefully reviewed the work of its predecessor, considered several courses of action suggested by them, and others advocated by members of the new committee. The final decision is recorded in the following resolution:—

"That this Association inaugurate an Insurance Department and appoint an insurance expert for the purpose of procuring insurance for its members, the services of the department to be available for such matters as improvements of risks, and all matters pertaining to insurance and that the Finance Committee be asked to take into consideration ways and means."

In considering ways and means, the Finance Committee recommended that the Association should undertake to advance the necessary finances up to the amount of \$3,000 for one year, providing that \$1,000,000 of business was previously promised to the department.

In response to requests made of the members, it was reported to the Insurance Committee that definite pledges to the extent of \$1,250,000 of business had been received, and the committee therefore decided that they were at liberty to organize and secure the services of a competent manager. A large number of applications for the position were received and carefully considered; the unanimous choice of the committee fell on Mr. E. P. Heaton of Montreal, who was duly engaged and who assumed office on the first of February, 1905.

The wide publicity given to the committee's proceedings and the thoroughness with which the investigations of the previous committee had been conducted, created an immediate demand upon the time and services of the manager, and the next section of this report will present a synopsis of the result that has been accomplished in the first six months of the department's organization, this period ending concurrently with the termination of the Association's financial year, viz., July 31st.

2. Work of the Department Since Its Organization.

On February 15th, the committee issued a circular letter to the members, advising them that, at the outset, the department would confine itself to the following general lines:—

- (1) Suggesting improvements in risks which would carry commensurate reductions in rates.
- (2) Advising members as to the adequacy of the fire insurance carried.
- (3) Assisting and facilitating the adjustment and settlement of loss by fire, when such occurs.

The result, so far as figures can adequately describe the work performed, in each of these three directions may be summarized as follows:—

(1) The manager has personally visited and inspected 48 plants of the members of the Association, whose aggregate insurance has amounted to \$2,928,520. In every case where improvements were reasonably possible, the members have evinced a ready desire to make such improvements, and so far as can be ascertained, a direct saving in the insurance premiums of our members has been effected to the amount of \$7,724.23. It will be borne in mind that this represents the saving on the first year's premiums only, and that equal benefits will be derived during many succeeding years.

(2) The department has had submitted to it for examination and report, as to the adequacy of the fire insurance carried, policies of insurance for 78 members, covering 86 separate and distinct plants, involving a gross aggregate insurance of \$6,757,274. This figure includes that in the last preceding section, as an inspection invariably includes the examination of the policies covering the same.

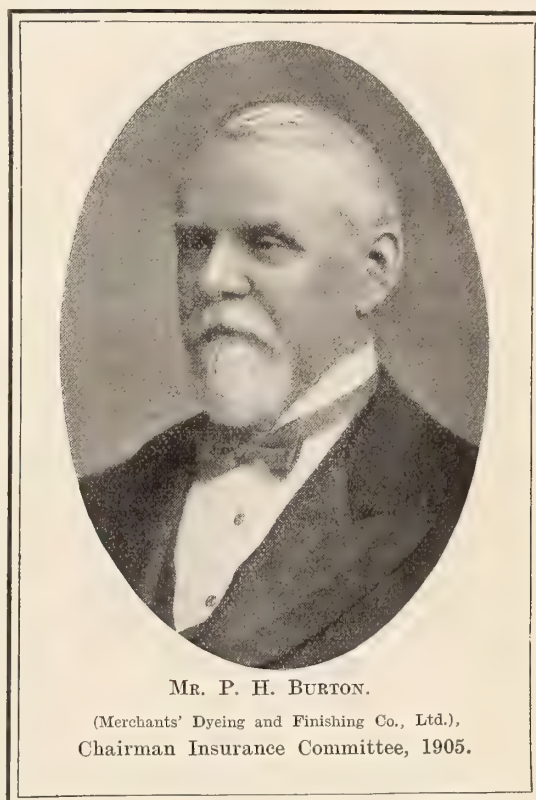
(3) The department has assisted in the adjustment of five fire losses, representing an aggregate loss of \$43,322.24.

It is impossible in this report to even indicate the conditions found in connection with any of the three sections thus detailed, but it is safe to record the general conclusion that in the vast majority of cases, the examination and report revealed many deficiencies which were duly rectified, and the full benefit of which the future will alone determine. When it is recorded that the department has re-drafted and re-arranged 51 insurance schedules, the importance of the last comment will be fairly well appreciated.

As a result of the earlier proceedings of the department, the committee found it necessary to lay down a fixed and definite scale of charges for work to be performed on the lines just indicated, and on the 1st of June, a pamphlet was issued to the members containing this information. It is confidently expected that

in the present year, these charges, moderate as they admittedly are, will provide the necessary funds to pay the expenses of the department.

As already mentioned, the committee did not consider it wise, at the outset, to make any special effort to secure and place the fire insurance business of our members. There were two reasons for this, first and primarily, because it seemed to them of more importance that the department should seriously undertake the important work of seeing that the fire insurance carried by our members was in proper shape, that in the event of the occurrence of a fire, they would be found to have policies good for their face value, unhampered by technical conditions and covering everything it was their intention to cover. The committee fully realized that the proper time to look to the insurance policies was before rather than after a fire. The work that has been done, as mentioned in this report, the committee believes fully justifies the course adopted, and if an added reason be required, it is found in the statement they reluctantly record, that in three out of five fire losses, in the adjustment of



MR. P. H. BURTON.

(Merchants' Dyeing and Finishing Co., Ltd.),
Chairman Insurance Committee, 1905.

which they participated, the assured were heavy losers by reason of imperfectly drawn, or imperfectly understood contracts. A second reason that actuated the committee in adopting the course suggested was that they regarded it as unwise to make the department a brokerage office until they had first made arrangements to successfully handle the business and next to place it; the first involved proper office assistance, the second proper arrangements with the various insurance offices; to both of these features reference is further made in the next section of the report.

Despite the view just expressed, the work of the office brought business to us, and in the six months ending July 31st. we have placed business to the amount of \$679,725, and we have definite instructions to place at the respective dates of expiry, a further amount of over \$600,000; we have, moreover, scarcely touched the original guarantees of \$1,250,000 with which the department started its organization.

The committee is glad to record that the department is being freely consulted in respect to character of construction of fire risks, particularly in the case of new buildings, to the proper equipment of risks with private fire appliances, and to the many

problems that arise in connection with fire insurance matters; in a word, it is being used in many ways that cannot be indicated by other than general expressions, but its growing usefulness and importance to the members of the Association is manifest.

THE PRESIDENT:—That is a very important section of the report, and we would be very glad if any person wishes any information in reference to any of the points that he will ask for it. It is possible some of our members have not quite understood how that department can be of service and assistance to them in the way of advice through a competent manager who thoroughly understands the question from the insured's standpoint.

There being no discussion, Mr. Burton continued the reading of the report.

3. Outline of Future Plans and Policy.

The committee is firmly impressed with the necessity of now making arrangements for a systematic and thorough effort to



MR. JOHN HENDRY.
(British Columbia Mills, Timber and Trading Co.),
B.C. Vice-President.

constitute the department into a large brokerage office for the placing of the business of our members, and this involves,

1st. Proper assistance in the Office.—This matter has been before the Finance Committee and it is suggested that it be referred back to them to make such arrangements as they may consider necessary or advisable.

2nd. Proper Arrangements for Placing Business.—The committee, on behalf of the members, naturally desire to be in a position to place business with all companies licensed to do business in Canada, and to this end, negotiations are now in progress. It is suggested that the committee be given a free hand in the working out of the details.

The question will naturally be asked, what benefit will accrue to the members by utilizing the Insurance Department in the placing of business, and the committee think this question should be answered in a way to obviate any mistake or possible misconception. The committee believe their duty to be the devising of ways and means to lower the insurance tax, and they moreover believe that no surer way can be found to accomplish this than to reduce the fire waste. It is therefore proposed to utilize the funds of the department to inaugurate a corps of

trained, efficient inspectors, who will inspect the risks from the the members', not from the Insurance Companies' standpoint. The committee is firmly of the opinion that the greatest benefit it can confer on the members is to inaugurate a regular systematic inspection; they believe this will contribute, more than any other thing, to a reduced fire waste, a result which of necessity must ultimately receive proper appreciation at the hands of the underwriters.

Further, it is proposed to make the Insurance Department a statistical office in which will be recorded the actual facts relative to the fire insurance of the members of the Association, in other words, a record will be kept of premiums and losses, properly classified according to lines of business, so that we may know how to meet the old argument so often used, yet so seldom justified by figures, "your class of risk does not pay!"

The committee is of the opinion that apart from the efficiency and economy that will characterize the working of the Insurance Department, the members supporting it will in the two directions above recorded, benefit to an extent that can scarcely be adequately expressed, but which, at least in their judgment, should afford the most powerful incentive to the members to support the department.

It is recommended that the following questions receive attention:—

- 1st. The adoption of a Uniform Statutory Policy for Canada.
- 2nd. Uniform Building Laws.
- 3rd. The appointment of Fire Marshalls whose duty shall be to investigate the origin of fires.
- 4th. That where Public Franchises entail increased insurance rates, such additional rates should be borne by the holders of the franchises instead of by the assured, as is the case at the present time.

Each of these questions has an important bearing upon the fire insurance business, and whilst your committee cannot in this report enter into details, they would commend the subjects to the consideration of the in-coming committee as being worthy of full investigation and prompt action.

Respectfully submitted,

P. H. BURTON,	E. P. HEATON,	R. J. YOUNGE,
Chairman,	Mgr. Department.	Secretary.

MR. BURTON:—Of course, Mr. Chairman, you can see there is a pretty big programme outlined here. I do not suppose the in-coming committee will be able to overtake it all immediately, but you can see what the aim and idea is. I might say there are incidental benefits which have accrued to the Association through the formation of that committee, for the reason that \$600 worth of advertising was secured for INDUSTRIAL CANADA by the fact that we had an Insurance Department; and further there has been quite a considerable increase in the number of members of the Association from the fact of having an Insurance Department. You know very well that results of this sort cannot always be put into exact figures, but we believe the department is doing a good work, and we hope, as far as we shall be able, and as far as the funds will allow, the Finance Committee will be in a position to supply the ways and means to make the department more useful in the future than it has been in the past. I beg to move the adoption of the report. (Applause.)

MR. THOS. RODEN:—I beg to second the adoption of the report. I would like to ask a question whether the agents' fees that are secured by taking risks in the ordinary course of business will, by means of this department, be transferred from the ordinary agents to the department?

THE PRESIDENT:—I will ask Mr. Heaton to answer the question.

MR. E. P. HEATON:—Undoubtedly, if arrangements are made with some of our companies that we can thoroughly recommend to the Association.

MR. RODEN:—In seconding the report I have much pleasure in congratulating the committee on the work they have done. If we have done nothing else we have secured the recognition from the insurance companies that we do not intend to be imposed upon; and by an intelligent presentation of our case, and by fortifying ourselves with the facts, we can intelligently resist any unjust claims. I consider that Mr. Heaton and Mr. Burton and the other members of the committee have done a great service to the Association. We owe them our thanks, because it has taken considerable time and ability to put this matter in the position it is in to-day.

THE PRESIDENT:—This is probably one of the most important reports we will have to consider during our sessions, and I would like to have as much discussion over it as the members care to bring on. There are a number of points which I think we do not perhaps fully realize the importance of in the rapid reading of the report, and we would like very much if any member has any question which he would like to ask if he would kindly do so. Mr. Heaton is here, and will be in a position to answer you intelligently and clearly on any matter which may occur to you in connection with the insurance question.

You may be glad to learn of the risks which have been visited and inspected by Mr. Heaton. That is another feature which I think appeals to every one of us. I think perhaps that the majority of our members in the past, when an inspector has visited them—I am speaking of those outside of the New England Mutuals—have paid very little attention to what that inspector has recommended, for more than one reason. They have felt, probably, in the first place, that they were not in a position to judge as to whether the recommendations made by that inspector were valuable or not, and they have felt that they were practically in his power. He would walk around your plant and he would say, "Do this" and "Do that." Some of the recommendations appeared to you entirely useless, and you probably did not do them, and there was no penalty for non-compliance; if you did do them, there was no reward for your outlay. Now, if we have, as we have at present, a thoroughly competent gentleman who can walk around your plant and size it up from your standpoint, and meet the inspector there and go around with him and take your side of the question, and handle it with the inspector, before you are through you will find that you know just where you stand, and that if any improvements are made you are going to get a return for your outlay.

Then the Chairman has told you in the report about the policies that have been inspected, and in almost every instance I think the policies were found to be far from covering just exactly what the insured believed he had covered. The schedules were not worked out properly. In all those ways the department is of very considerable assistance to our members, and we would like to have that thoroughly understood. We want every member to make use of it and we would like to have any gentleman here ask any questions which he would like to have elucidated in connection with this report.

The New England Mutuals.

MR. W. H. ROWLEY:—In clause 3 of the report, in the second paragraph, it says: "The committee, on behalf of the members, naturally desire to be in a position to place business with all companies licensed to do business in Canada." I would like to ask whether it is the experience of Mr. Heaton that there are enough companies in Canada to undertake the covering of very large risks. With reference to the company which I represent, we find it impossible to be covered in Canada. We carry from \$1,250,000 to \$1,300,000 worth of insurance, and we find we cannot, even if willing to pay in some cases exorbitant rates, get the insurance, and are forced to go to the United States, and I must say we get better insurance for less money than in Canada. I would like to ask Mr. Heaton whether it is or is not his hope and the expectation of the committee that the insurance required in Canada can be obtained from companies licensed to do business in Canada?

MR. HEATON:—There are a number of risks in Canada which it is practically impossible for companies licensed to do business in Canada to carry, your own amongst others, that must of necessity go to the United States or Great Britain, but the committee consider it to be unwise that they should represent anything in this report that would leave the impression that they are encouraging or going to encourage insurance with unlicensed companies. They have felt as long as the companies here will do justice to the members of the Association, will quote fair rates, will support reductions in rates when improvements are made, that just so long this department will give them its full and hearty co-operation. At the same time there are a number of cases where we have to go outside, where we are ourselves prepared to undertake the insurance for our members outside. That, however, is only a subsidiary condition, and is not a permanent feature of the work of our department.

MR. ROWLEY:—I would like to ask whether or not there is a reasonable prospect of our being able to get in Canada in the next three or four years something like as low rates as we are able to



MR. W. S. FISHER.
(Emerson & Fisher, Ltd.),
N.B. Vice-President.

obtain from the Factory Mutuals in the United States, on risks that are under the inspection of, or at all events are acceptable to and accepted by, these people—thoroughly well built risks? Have the committee proceeded far enough to say whether there is a reasonable probability of our being able in the next two or three years to get the amount of insurance we want at somewhere near the rates; because it seems to me that is a very important point with very large insurers. If we are not going to be able to do that we will have to play with the devil we know rather than with the devil we don't know, and it won't do to antagonize either side.

MR. HEATON:—Mr. President, this department cannot do better than the best, and the best, in the experience of all insurance men, if honest, and of all manufacturers, is that the New England system of insurance is the ideal gold brick insurance, and better than that you cannot do.

THE PRESIDENT:—I think Mr. Rowley is asking whether there is any prospect of the same kind of insurance being furnished

through Canadian sources as it is possible at present to obtain through the New England Mutuals?

MR. ROWLEY:—That is, not only as to amount or kind, but as to something near the rates. For instance, the Eddy Company risks are on a basis of about one per cent.; for a very wide-spread risk, which used to be considered very hazardous, we pay about one per cent., but we get a very handsome refund every year, and as long as we have got that, as long as we cannot do any better, we cannot give quite as hearty support to the work of this Association as we would otherwise be very glad to do. All I wanted to ask was whether you had got far enough along to tell us that?

MR. HEATON:—If I may answer that in the same way, I believe the New England Mutual is better than the best we can ever offer, and there is a great deal in connection with our own work that is less than the best. We have confined our work to trying to bring up the inferior to the better, and that will be really the policy of the department for the next year or two. When we are in a position to advise the members of this Association that we are able to do for them what I have termed equal to the best, then we will bring it before this meeting; but at present we are not in a position to do it, and I think it would be unwise to clog the wheels of this department by attempting to do something for the members which is beyond our power. My advice is when you have got the best, stick to it.

The Views of an Insurance Agent.

MR. G. F. MARTER:—I am an agent for an insurance company, and I presume it will be thought very strange if I do not say something in regard to the question raised by the gentlemen asking can we give such an insurance as they have. I say, "No," distinctly "No." It is impossible for the companies in existence in Canada to give rates that are given by the Factory Mutuals, or to give the same results. For instance, the Mutual Companies exact from the members joining the full amount of the premium, and give back in proportion to what the results of the year may be. Companies doing business in Canada take your premium, and no matter what the results are, they have got to pay the full amount of your insurance. You can't contrast the companies. You cannot say one is cheaper and doing better for you than the other. If we had such an organization in Canada as the New England Mutuals, we would conduct it on the same basis, but I am told that it is impossible with the few risks we have in Canada to make such an organization. It could not stand. It could not last. It would not be able to do business.

I think it is a good plan having this Insurance Department conducted as it has been conducted in the past by this Association. I think great good has been accomplished during the past year; and in my judgment what is now asked, namely, to create an Insurance Department with a view of receiving premiums and placing business, will be the saddest and greatest mistake that can be made by this organization. In the first place, what are the members going to gain by it? You have to pay the same amount of premium which you are now paying, dollar for dollar; you have got to place it with the companies in Canada. I suppose Mr. Heaton cannot do any better than I can, but Mr. Heaton has an advantage over me to-day because he can act for you gentlemen. Supposing, for instance, I place this gentleman's insurance and he has a loss. I cannot work for the adjustment of that loss, because I am prohibited. When the loss occurs he will be called upon to act for you. The company would appoint someone else, and those two would appoint the third man.

MR. ROWLEY:—Is not the insurance agent the agent only for the company?

MR. MARTER:—Only for the company, but when it comes to adjustment purposes he has nothing to do with it. He would be looked upon as working for one person. Now, in the adjustment of a loss, the man appointed obligates himself to do what is right and best for all. Who is the man most likely to do it? The independent man, the one placing the loss, or the man who is act-

ing for the company? You have a weapon in Mr. Heaton in this Insurance Department that you never can or will have if you undertake to place insurance as outlined in this report.

Great good has been accomplished, no doubt about that. We read in this report that in the past year the fees have been very nearly sufficient to meet the expenses of this office. Then, in fact, one point is established, as matters are going you are receiving money sufficient to pay its way. That is a great thing in the start. Then I say again, Mr. Heaton or the Bureau is in a position to advise and work for and with the Board of Underwriters in this country in such a way as no agent can ever possibly do. Therefore, admitting it in every way, it looks to me like departing from what are true business principles and that which is in the interests of our organization.

What will you find from what is outlined here? It will require a larger staff. That means larger expenditure. I will guarantee it will mean a large addition of salaries which will use up the dollars. You will antagonize all the insurance agents on the continent against this organization. I place a large number of risks for manufacturers, and I will not allow them to slip through my fingers without a fight, and what would be my case is the case of hundreds of men throughout the province, some of them no doubt members of this Association.

Therefore, I do not think that it would be in the interests of the organization to take up with or try to create an insurance body to place insurance for the members of the organization. These are my views. You may say that is because I am an agent, but if you can show me that it is to the interests of this body to do as outlined here, I will cheerfully and willingly give my support to it. You have advantages to-day that you can never have if you have an insurance bureau for placing insurance. The Board will never listen to you as they listen now. You will never be able to wield that influence which you wield at present in the adjustment of losses and generally looking after losses. Therefore, Mr. Chairman, I certainly think it would be a retrograde step.

Unfair Treatment.

HON. E. J. DAVIS:—Mr. Chairman, this question of insurance seems to me to be one of very great importance to every member of this Association, and while I am speaking now for myself, I think perhaps I will voice the views of every member when I say we are anxious to place our insurance with Canadian companies if the conditions are at all equal. (Hear, hear.) I feel that very strongly, not only with reference to insurance, but anything else.

I want to give my experience. I have had experience in two cases, and perhaps some suggestion or information can be given by your meeting that will assist in harmonizing or improving what I consider to be rather an extraordinary situation.

I have one plant situated about half way between Toronto and Montreal. It is not what is called a first-class building under insurance titles. It is a frame building on a stone foundation for manufacturing purposes, but it is in a certain class of manufacturing, and there is a schedule provided in which it is stated by the insurance association that if you make certain changes complying with this schedule you are entitled to a certain reduction in your rates.

When we obtained this plant we went to work and made certain changes, and after that was done I went to Montreal to see the gentleman who had charge of that district, and explained the situation to see what we could do in the way of reducing the rate. The ground was gone over and a certain rate was arrived at. I do not say that I was altogether satisfied, however I was not complaining very seriously.

That worked for about a year, and then we had a disastrous fire in the city of Toronto. Millions of dollars of loss came to the insurance companies, but not one dollar of loss in that great fire came from the class of risk which this was, and what happened? Just as soon as my policy expired the premium was raised thirty per cent. What for? Not because the conditions of my property had become worse at all, but simply because there was a great

conflagration in the city of Toronto, dealing with an absolutely different class of property. In my way of looking at it that is very unfair. I am glad to see here my friend Mr. Marter, who is a good insurance man, and I think some wise advice to their Association on points like that would do a great deal towards making the feeling between the insurers and the insured more kindly.

The second case to which I wish to refer bears in a little different way. I had cause to erect an absolutely new plant for the same class of business near the city of Toronto. I determined to meet the views of the insurance companies if I could. I consulted them about the plant, advised with them, not once, but two or three times. We did all we could in laying out the plant to meet their views and get a new rate both as to the class of material used and as to the form of construction of the building. The result was, after the building was completed we expected to get a lower rate, and their inspector came and examined the premises and spoke very highly of them, and said it was perhaps a better risk for that particular class than any other one in the country. But when the rate was fixed at, say just now for the purpose of illustration, one and one-half or one and three-quarters, and we were told that was the lowest rate they could give us, then thirty per cent. was added to it because there had been a fire in Toronto a year or a year and a half before, dealing with other classes of property altogether. I said: "You don't mean that you are going to charge thirty per cent. in addition on property that was not constructed when that fire took place, when you based the rate on the equipment on this particular factory on your own schedule rates?" He said: "We are compelled to do that." Then I tried the New England Mutuals sprinkler system and got rates from them. I think they did very well on the rates. I am not finding any fault as to that, but we did what Mr. Heaton has been good enough to say here was good; I think it is true as far as my experience goes. We went to what apparently is the best thing in insurance, the New England Mutuals. They examined the property and they made a rate, and that rate will not be more than half, if it will be half, of the very best rate our Association here could give us on that class of property.

All I am anxious to do is to work with the members of this Association to have an understanding with the insurance companies to see that they will give the business men of Canada the very best rates that they can get and ought to have. We must compete in the markets of the world with United States business men. If they get lower rates than we do, we are at a disadvantage, and the Insurance Association of Canada are putting men out of business at the rates they are charging to-day. I trust the result of our discussion will be to our advantage, and that we will all get useful information. (Applause.)

Brokerage Office Not Wanted.

MR. HENDERSON:—I am sure we all agree that the matter of insurance is one of the most important to come before this body, but I think we want to consider the matter very fully before we agree with this report.

As many of you know, I have expressed myself before about it. While I am connected with no insurance company, I think it would be a very unwise thing indeed if we are going to antagonize the fire underwriters of Canada, and it seems to me the usefulness of this department would be gone forever if it established a bureau for the purpose of placing insurance. As has been mentioned by Mr. Marter, every insurance agent in the country would feel he was aggrieved. But, apart from that, it seems to me that it would not be advisable to carry out the suggestion contained in the second clause of the third paragraph, and that more good will be done for the members of the Association than can be done in any other way, by adhering to the lines which are being followed now.

I have had to make representations to the Fire Underwriters' Association several times, and I found they were always very willing indeed to meet our wishes as far as they could. I found the best results we could have were in getting outside inspection. It is very true, I suppose, that we think our own judgment is good

in matters of this kind, but we are not specialists or experts in the matter of putting in fire appliances, and if Mr. Heaton or his staff would come around to the various plants when requested, inspect the premises and make suggestions, I think by that means and by way of fire prevention, that the rates would be considerably lowered. It is not to be expected that a man going around his plant every day will notice these things, but often to a stranger coming in some little alteration will suggest itself which would make it a safer risk.



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It seems to me if the whole energy of the department were devoted to that branch, and also to the inspection of policies, great good would accrue, but if Mr. Heaton's department is going to add a department for placing insurance I think we will injure the work. I think I am correct in stating that the Fire Underwriters' Association of Canada have made it contingent that any insurance that is placed by this department is to be placed through them, otherwise they will not recognize this department. We want to be very careful in recommending anything of this sort.

MR. MCGIBBON:—Personally I am not at all interested in this question, but I thought a few facts regarding a large company might be of interest. We place insurance of probably three million dollars a year on our factory and headquarters at Montreal, where we have the sprinkler system, and we are insured in the Factory Mutuals of New England. Our insurance is a pretty hazardous risk, the rubber business. Our insurance averages us less than twenty-five cents in Toronto, Winnipeg and Montreal, but where we have to insure with the Canadian companies our premiums are all the way from one and a half to two and a half per cent. So that I think anything this Association can do to bring the insurance for the manufacturers of Canada down to the basis of what we can get in the United States is a good thing. I am not prepared to say how they can do it, but if Canadians are to compete with the United States, they ought to be on equal terms with them.

MR. PIGGOTT:—Permit me to ask a question. In the event of my holding a policy in the New England Mutuals, and in case of a loss, what is the legal status of my claim against the companies there? There have been difficulties in the past in making collections, but whether there is any different arrangement now I do not know.

MR. MCGIBBON:—The trust companies and bond holders of all the largest companies of Canada accept these policies at their face values. The New England Mutuals are divided into two classes, major and junior companies. The major companies are a little more careful in selecting their risks, but their rebates are greater. You pay a basic rate at the beginning of the year of one per cent. and at the end of the year you get a rebate of seventy-five to eighty per cent. The junior companies do not make such a large percentage; they do not take the same care in selecting their risks. The policies of the larger companies are all subject to this condi-

tion, that every time you take a policy out in them you are subject to a call of five times your annual premium. If it is to-day a thousand dollars, in case of a big conflagration you are liable to a call for five times that amount, but all the bond holders in the United States or Canada accept these policies as security for their mortgages, so that there is no question at all about the senior companies being perfectly good.

More Unfair Treatment.

MR. ALEX. SAUNDERS:—I am extremely sorry I was not in earlier this morning to hear the report read, but I fully appreciate the work that has been done in this Insurance Department.

I had the misfortune to be burned out in 1902, and I built a new factory as nearly as possible in accordance with the regulations of the Fire Underwriters' Association, on the promise that I should get a very low rate of insurance. When my policies were made out they put a rate upon me of \$2.65, and yet I had a factory in full accordance with their requirements. Then, as a previous speaker pointed out, a fire occurred in Toronto, a business risk that did not concern my factory, did not increase the hazard, and yet I was raised twenty per cent. upon my policy to cover the losses made in Toronto. When I appealed to the Secretary, and asked him why, he said they required it to meet the loss which they had made in Toronto. When I asked him why I should pay for a risk that was entirely different from mine, and did not increase the hazard, he said I must do it, or I would have to have my policies cancelled.

I am quite in accord with Mr. Henderson, that it would be a very dangerous thing for this body of manufacturers to antagonize the Canadian Underwriters' Association, because we are completely at their mercy. (Voices: Not at all—not at all.) Pardon me, I have found them the most autocratic body in this country to do business with, and I have had an experience of thirteen years with them. We have an autocratic Secretary in the first place in the Underwriters' Association.

MR. MARTER:—They have a new Secretary now.

MR. SAUNDERS:—Mr. Robertson, certainly.

MR. ROWLEY:—They have a man in Montreal named Hadrill just as bad. (Laughter.)

MR. SAUNDERS:—The idea is to get all the thing will bear. Another thing about Mr. Robertson is this: he is the only man who knows what insurance costs, and he knows without going out to examine your risk what your risk is worth to carry. (Laughter.)

Now, gentlemen, I am satisfied that our Association is taking the right move to get at these cases. The only way to bring the matter to a head is to do as the Japs did, just fight it. We can do it right, but let us not do it hastily. The moment the underwriters find that they are to be hurt, they will come to our terms. I know that to be the case. They met me because I was going to take my insurance out of their hands altogether.

Here is a case in point. In the city of Toronto a few months ago, where the rates were raised very heavily, a certain firm said that they would go into the sprinkler system. They went to the Underwriters' Association in Toronto, and the best price they could get was ninety-five cents under the sprinkler system. Then they went to the New England companies, they put in the sprinkler system, and to-day they are getting that insurance for about forty-two cents. Later the Secretary of the Underwriters' Association came to the firm and said, "We want to take your insurance." The firm replied, "You cannot have it, it is too late." They will come to us when it is too late, and when we are strong enough to carry our own insurance, or to have some other kind of insurance.

Go slowly. Mr. Heaton has done good work in the past year, and there are many ways in which he can assist us to arrange our insurance. It is a common complaint that we do not read our policies, and that we have to have a fire to find out that we are insured. If we would have either Mr. Heaton or some member of his staff come up and show us what to insure and what not to in-

sure, we would have our insurance very much cheaper and very much more satisfactory, and when we were burned out we would get our money without any hesitation.

I am going to give you an idea how a gentleman in Chicago who is an insurance appraiser gave me a pointer. My factory is constructed of cement and brick. The floors are entirely of cement. It has good strong foundations and the main shafting all around is on cement piers. I was insuring all this. I was insuring the smoke stack. This gentleman told me I was insuring too much. We made an inspection of the factory together, and now I do not insure my smoke stack, nor my floors, nor my piers; I am saving my insurance on all of them. That is a line of work I want Mr. Heaton to take up, and teach us how to insure our buildings, and I hope he will pursue his work along the line he has been following. (Applause.)

Too Much Criticism; Not Enough Help.

MR. W. B. TINDALL:—Mr. President and gentlemen, as a member of the Insurance Committee, and one who has had some little to do with the deliberations that have come before the committee from time to time, and also as one who has had something to do with insurance, I would like to say that the committee has never at any time had the idea of approaching this question of insurance from the standpoint that we are going to fight the underwriters. We think that probably something can be done on the lines that Mr. Saunders suggests, of working and using every insurance company that is licensed to do business in Canada and all our Canadian insurance interests to the very best possible advantage, as long as has been previously said, as they treat us fairly. The fault I have found with the underwriters generally is that their attitude to the men who are using their insurance is an attitude of criticism. They never at any time look at the insurance question from the other fellow's point of view; they look at it entirely from their own point of view. In my twenty years' experience I have never come across an insurance agent but one or two who would come to me and say: "You can improve your risk on certain well-defined lines, you can improve your policy in certain wordings." He always leaves that for the insured to find out for himself, probably at the time there is a fire, and the consequence is he never gets the benefit of the insurance man's experience.

In an interview that I had in another Association that I represent, where we went before the committee of the Board of Underwriters, I said to them: "Gentlemen, what we cannot understand is why you insurance men will allow us to go on in this way; why you do not have your men come to us and explain how we can get our insurance cheaper; why you do not point it out of your own volition, and write to each one of us and say, if you only do so and so we can insure your properties for less than they are insured for to-day." I do not say that any change has been made now by the Canadian Board of Fire Underwriters, but their attitude is changing somewhat in that direction, and they are now pursuing probably a different policy. I think we can work with them. I think we can have a brokerage system which will not be antagonistic to them. I am not prepared to say, nor do I know, upon what lines, nor how we can carry that out, nor are we in a position to go into that at the present time. I think if the work is gone on with intelligently, and if the same brain power and energy that has been put into our Transportation Department is put into the Insurance Department, that we, before another twelve months are over, will have gone a long way towards solving the difficulties before us.

I wish to impress upon every member of this Association that if this Insurance Department is to be of any benefit to this Association, each member for himself must by some sacrifice to himself endeavor to use it in some shape or form. I do not say it would be a wise thing for our large insurers who have perfectly satisfactory arrangements to in any way disturb those arrangements, but I think each man to a greater or less extent can use the department. He may start to use the department probably in the direction of having our manager go and inspect his premises

and inspect his policies, and by using it in that way he will create an interest in the department which will certainly prove mutually helpful.

There is nothing like using a department if you want the interest kept up in it. I do not know of anything that would be more disheartening to the manager that has charge of any department than to find the members of the Association do not use the department to as great an extent as he might reasonably expect they should. I think each one should use the department, and see if he cannot get the help of the manager in some way or another, and keep adding to the interest of it.

As to inspection, if we on our part have our properties inspected, and if as the result of those inspections by our own men we improve the character of our risks, the underwriters are not going to be slow to notice that improvement. In that way we are going to have them perfectly satisfied with the course that we are taking and they will see that we are not working in an antagonistic direction towards them and their interests.

Operation vs. Education.

MR. J. F. WILDMAN:—From studying the insurance question I have come to the conclusion that the difference between the New England Mutuals and the Canadian companies is that the Canadian companies work on operative lines, while the New England companies work on educative lines. We have been operated on for a good many years, and while they say that we get what we pay for, after paying out thousands of dollars for insurance I often wonder whether we have got what we paid for. The difficulty was this, while we had the positive assurance of the Board that such and such a rate, although unsuitable, was fixed, and that they were satisfied with our plant, yet the next year they would tell us that they would have to cancel our policies unless we agreed to their raise in the rates.

The question is are we going to remain loyal to the Canadian companies, both the high tariff and the mutual, operating here in Canada? We want to do so; I don't think there is a member of this Association but is anxious and willing to pay every cent of his insurance to the Canadian companies. We want the money to be used here in Canada where we trade, and where our interests lie, but with a growing company it is a question just at what point it becomes impossible to do so. The testimony of every large insurer in this room to-day has been that he has been driven out against his wishes, and been compelled to go to the New England Mutuals, or companies of a similar character, because of the very competition which the Canadian Board of Underwriters have imposed upon him.

I have often thought it might be desirable to have some form of Government insurance, since fire is a Government loss and a loss to the country. Under proper inspection it would be a good thing, because our interests are mutual with every other factory as regards the raised rates that are imposed upon us as we grow. These are accounted for by the fact that some other factory, in

which we thought we had no earthly interest, was built on a plan that was a hazardous risk, and that insurance companies who did not have any statutory form of policy took that risk, classed it low, and gave it a low rate. Then, when the owner had a fire, and another man who had a hazardous risk had a fire, we who remained were operated on and paid for those fires, and the man who had the fire, who got his insurance, got a first class factory because he was educated; we got the worst of it.

I believe if the Insurance Department of this Association would issue a standard book on the construction and operation of plants that would meet the criticism of the insurance companies of the world, every member of this Association would be willing to put up \$25 to buy a copy, so that he might study the work and thoroughly familiarize himself with the question.

Then again, there must be some way by which mutual companies and high tariff companies could force isolated risks to build on proper lines, failing to do which they could refuse to carry the insurance. As it is at present they build a plant to which nobody pays any attention, then they apply for insurance, and we who have better risks have to pay for it. It is not right. I consider, therefore, that we should change from the operative principle to the educative principle. We are only children larger grown, and we learn slowly, so let us get a right foundation to work upon, let us get some standard line in which we are all interested, let us follow an educative principle which is uniform, and in time we may hope to become properly educated. (Applause.)

Department Renders Practical Assistance.

MR. WILSON:—I might say, Mr. President, that I have had some little experience with the Insurance Department during the past year, and I am of the opinion that it is pretty safe to leave the question of antagonizing the underwriters with Mr. Heaton and his Committee. I think they have good sense and judgment enough to know just how far to go.

Three years ago I built a new planing mill. Planing mills are regarded as a very hazardous risk, and it is a fact that the

great bulk of them are, but I built one which the inspector stated at the time was the best risk in Canada. Notwithstanding that I couldn't get a lower rate than two per cent. After the fire in Toronto they raised it twenty per cent. They are now working on a new schedule which will raise it considerably higher. We were notified of certain changes we would be required to make in the premises. We have an elevator with self-closing hatches inside the building, and we were told we would have to put the elevator outside. We were also instructed to put the stairs outside.

I took the matter up with Mr. Heaton. He came up to Collingwood, went through our risk, examined our policies and showed us where in case of a fire we would be likely to lose thousands of dollars that were not covered at all. The agent I have is a man who is admitted to be a good insurance agent. The ordinary run of insurance agents take up fire insurance as a side line; they do not take the time or trouble to study up in-



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surance, with the result they are as ignorant as the man they are insuring. We have to suffer from fire to find out we know very little about insurance. Mr. Heaton showed us some of our policies were practically valueless, yet we were paying three per cent. on the amount all along. If we had had a fire we would have found out we had several losses for which we would not get any insurance at all. He also showed us in his report how we would be able to make a large saving on our insurance by allowing him to place the insurance for us.

In my opinion this Insurance Department is of more value than almost any other department in the Association to ordinary manufacturers. I think we may safely leave this matter with Mr. Heaton and his Committee, and we will not be disappointed with the results. (Applause.)

MR. SAUNDERS:—The question Mr. Wilson has raised is as to the basis on which they place their risks. Mr. Wilson has a factory which is fully equipped, while his neighbor perhaps has a building twenty years old built of wood, with no protection whatever. According to the basis upon which they place planing mills, his neighbor gets as good a rate as he does as a base, and only pays the difference for lack of proper fire appliances. That I think is a very wrong system in the Underwriters' Association.

MR. HUGH BLAIN:—This is a question that is very far reaching; it not only affects ourselves but our customers all over the country. Probably we suffer more from lack of information among them than we do among ourselves. It seems to me, however, that the point before the meeting now is the policy upon which this department is to be organized, and the main point raised by Mr. Heaton has apparently dropped out of sight.

Now, I very cordially agree with Mr. Heaton in his conclusions. It is possible that we may not make so much money out of it by carrying it along on the lines laid down by Mr. Marter, but I think we will have a more efficient, a more important and a more permanent organization if we follow lines that will be entirely independent so far as the money question is concerned. I think we will occupy a much better position in the eyes of the insurance people and in the eyes of the public if we pursue a dignified and independent course, with our officers looking after the risks that we have instead of trying to make money out of the institution.

We know, sir, that insurance has been carried on in this country very much in a haphazard way. They have not been able to get their business worked into proper lines. I believe there is an earnest endeavor now amongst the insurance people to get their business upon a different footing. They call it a scientific basis. I do not know how scientific it may be, but there are reasons for these companies taking some of the grounds they have taken, and we should not altogether overlook their side of the question. It is a very difficult one. They are making a great effort now, and I think the best service this department could render the Association would be in trying to join with the insurance people in mapping out such a plan for their insurance as would protect our interests while they are advantageous to the insurance companies. (Applause.)

Give the Committee a Free Hand.

MR. BURTON:—I was just going to remind the members when this thing was first started it was under the smart as it were of the Toronto fire, and as you know a great many had the idea that we ought to get right to work and form a mutual insurance company. I suppose like many another thing you first of all have a superficial view, and the question is how to right it, but when we got to work and found out what a big job this insurance business was, we thought the best thing to do was to go slow. We have been going slow, we think, and sure. Still we think we have done a great deal of good and we also believe we have got a little better terms from the insurance people than you would have had if we had not been in existence.

Now of course in talking of your own business sometimes

you do not feel in a position to stand up and tell everybody exactly what you are going to do, and while we have ideas as to progress, because I suppose this Association is looking forward to progress all the time, the incoming executive will endeavor to use prudence as well as vigor with regard to this question of starting a sort of brokerage office. That will depend no doubt upon circumstances, as I think the report says that this matter should be referred back or that we should have a free hand in the matter. If it is the feeling of the meeting to pass a resolution that it would be against the interests of the Association to undertake anything of that kind, the meeting is certainly free to pass such a resolution and the Committee will of course abide by the decision of the Association. If on the other hand it is the feeling of the meeting that the Committee should have a little latitude, and do what they find best under the circumstances as the days and months go by, we shall do that. We shall be only too glad to take your instructions.

I might say that there is one way in which all the members could contribute something—they could give us information. Supposing Mr. Heaton were to ask all the members of the Association to give a few facts with regard to the amount of insurance they carry, what it costs, and the class of risk. That information would be absolutely private, inaccessible even to the members of the Committee, and solely for the use of the manager who might tabulate it, as he has expressed a desire to do, so as to have figures to show in case of any dispute. For instance, in the matter of an advance upon a certain class of risk, he would be in a position to protest if there was no reason why that advance should be made in Canada. Without the facts and statistics it would not be in his power to take that position. I think this is a way in which all the members of the Association could help. (Applause.)

MR. MARTER:—Allow me to say to this meeting that each company, and it has been so for the last thirty years, makes its return which is filed in Ottawa. If you look at the insurance group you will see in those thirty years the companies have not collected a sufficient amount from premiums to pay for the losses and expenses. Now I am saying that simply in justification of what some of you have said as to the Board exacting higher rates. I have on three separate occasions gone to New York and Hartford to get lines placed on manufacturing risks, and invariably the companies have said, "We want no business in Canada, there are too many losses, too many fires," and they would not take my line.

In regard to what Mr. Tindall has said with reference to agents taking no interest, I am in a position to prove by Mr. Heaton that I do take an interest. I have appealed to Mr. Heaton in some cases where I thought the insured ought to realize certain benefits, and he went and inspected the risks. In that way I have done all I could to show my interest in the assured, and I think to-day, in taking the position I am taking, I am doing that which is best for the gentlemen composing this Association. If your Committee decides to engage in the placing of risks, they have got to get the agency of some company. What better position is Mr. Heaton then going to be in than I am to-day, or some other agent? Outside of the organization, however, Mr. Heaton and his Committee are in a strong position, much stronger, in fact, than if they became the agents of what has been described as that autocratic institution.

MR. RODEN:—My object in asking the question was to ascertain whether the fees were high enough. We recognize the fact that we have to have funds to maintain a department such as Mr. Heaton in his ideals wishes to create, and we quite recognize to-day we are having a very imperfect form of inspection. I think that one of the principal items mentioned in this report was that we should have in this department a higher status of inspection. As has been emphasized here to-day, the agents are more interested in collecting their commissions than in looking

after the interests of the insured. It is from the insurance standpoint I think the organization is taking up this work. We really want to endorse any action that will strengthen the hands of Mr. Heaton in maintaining our position as against the insurance companies, not to antagonize them but to place ourselves in a position that we can talk with them on a proper business basis.

MR. H. W. FLEURY:—I would like to say a word in appreciation of the services that have been rendered to our firm by the Insurance Department. A number of gentlemen who have spoken here to-day are those who carry low risks, but we have in our Association a great many men who cannot obtain such insurance and yet to whom insurance is a very important matter. Shortly after the organization of this Department, at my request Mr. Heaton made an inspection of our premises and also examined the schedules of our policies. I may say it has afforded us a great deal of satisfaction and relief from the uncertainty we felt in regard to what our policy really meant, to have Mr. Heaton draw up a new schedule as he did. We have felt since that we have been covered properly and we can rest quite assured if a fire occurs we shall receive payment for our loss in the way we expect.

Another point, our rates were not at all equalized in regard to the different buildings. Mr. Heaton went into the matter and advised us that in some cases our rates were too high. In the month of July that insurance was renewed, and I may say that for the same amount of premium we received a new policy with a very great addition to the amount of it—a saving of probably twenty per cent. in our premium.

I think that the Insurance Committee has acted with the utmost wisdom. I feel they have acted in such a way that we should still continue them our confidence, and allow them that free hand they are asking for. I feel sure they will not carry matters on in such a way as to antagonize the insurance companies, but will give full consideration to the relationship between us. They have acted with eminent wisdom in my opinion, and I for one would give them a free hand with full support for future action. (Applause.)

The President then put the motion, "Moved by Mr. Burton, seconded by Mr. Roden, that the report of the Insurance Committee be received and adopted," which on a vote having been taken was declared carried.

THE PRESIDENT:—I will now call upon Mr. Cockshutt, Chairman of the Railway and Transportation Committee, to read the report of his Committee.

On motion by Mr. Russell, the report was taken up clause by clause.

RAILWAY AND TRANSPORTATION COMMITTEE'S REPORT.

The Railway and Transportation Committee desires to lay before the Association its report for the current year, and does so with greater pleasure as the report indicates a continuation of the highly successful administration in the interests of its members of the Association.

Owing to the resignation of Mr. W. H. D. Miller, under whose management the department was so successfully established, your Committee was obliged to look about for a successor. It is with the greatest satisfaction that they report having secured the services of Mr. J. R. Marlow, who served for many years on the staff of the Canadian Pacific Railway, and who is to-day recognized as one of the best freight experts in the range of Canadian railway work. In presenting this very important report of the year's work, your Committee feels that no further evidence of Mr. Marlow's good management or success is required.

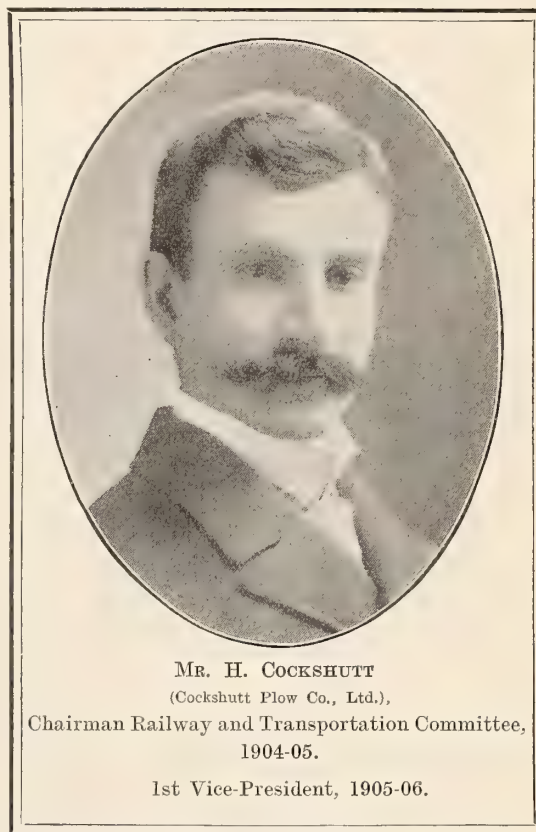
The year just closed has been a very active one in transportation work, partly because of the unsettled conditions surrounding transportation arising from the appointment of the

Railway Commission eighteen months ago, and also to some extent on account of the change in the chairmanship of the Commission. A number of cases of great importance to the Association have, however, been dealt with by the department. Some of these, by preference, have been settled with the railways direct, and others brought before the Railway Commission, with results most gratifying to the Committee.

Among the adjustments secured during the year which stand out prominently are the revision of rules governing demurrage charges and the rates upon export traffic via the Atlantic seaboard. Details with regard to these are appended as a part of this report, but it is safe to say that each of them marks a new epoch in Canadian railway practice and the results secured through either of them justifies the existence of the Department. The decision of the Board of Railway Commissioners respecting interswitching between railways is another important feature.

1. Classification.

Due to its importance, the classification matter has been the subject of correspondence between the department, the railways



and the Railway Commission during the past year, and is still so, with a prospect of an early and satisfactory adjustment.

To various rules and conditions governing the classification, exception has been taken by the department with the prospect of improvement in, first, the minimum weights for large cars; second, mixed carload arrangements west of Port Arthur; third, charge for light and bulky articles loaded on flat cars; fourth, owners' risk condition and penalty clause; fifth, minimum charge for single small shipments; and sixth, individual ratings.

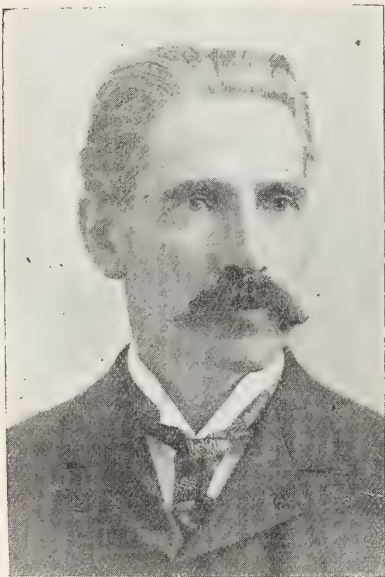
2. Railway Traffic and Contract Forms.

Another matter closely affecting the interests of almost every member of the Association is the conditions of contract or terms and conditions of carriage printed on the railway companies' form of shipping bill. This matter, too, has been dealt with exhaustively by the department and a conference is due with the railway companies and the Railway Commission for the purpose of fixing these conditions, which have notoriously been against the public, upon a reasonable and equitable basis.

THE PRESIDENT:—Referring to clause 2, that is a very important question. It is a good deal along the lines of our insurance questions. Those schedules have been read and criticized, and are going to be worked out through our department with fairness and justice to the shippers and to the railway companies.

3. New Zealand Service.

The Committee was requested by the Canadian Pacific Railway to lend its influence in favor of an alteration in the route of the New Zealand service substituting the port of Auckland, N.Z., for the call at Brisbane, Queensland. After a thorough investigation, while re-affirming the opinion previously expressed, that what is required is a direct service from the Atlantic Coast to New Zealand and Australian ports, your Committee, in the interests of the promotion of trade between Canada and New Zealand and in view of the fact that the Government of New Zealand was willing to pay the subsidy, the payment of which the Queensland Government was desirous of escaping, made a recommendation to the Executive favoring the change.



MR. D. W. ROBB.
(Robb Engineering Co., Ltd.),
Nova Scotia Vice-President.

MR. ROWLEY:—Has that been found to work to the advantage of the shippers?

MR. COCKSHUTT:—It is not changed yet.

3. New Zealand Service.

The efficiency of the direct steamship service between Canada and the West Indies has been under consideration by the Committee. The matter was very fully discussed with those interested, and the investigations of the Committee indicated that the present service was unsatisfactory owing to the length of time occupied by the steamers in making the trip. The contract which expired in June has not been renewed, an interim arrangement only having been effected for the continuance of the service. The views of the Association respecting improvements in the service have been communicated to the Department of Trade and Commerce. It has been recommended that a faster and more frequent service should be provided, which could be done with the steamships at present in the service by shortening the length of time the boats are delayed at

both ends of the route and by cutting out the calls at some of the smaller islands where little or no traffic is handled. Investigations indicate that this can be done, without inconveniencing the passenger traffic, in such a way as to reduce the time of the trip and make possible a ten days' service.

5. Canadian Shipments via Subsidized Lines.

Several instances were reported to the Committee where Canadian shippers had been refused space for their shipments on steamship lines subsidized by the Canadian Government while shipments from the United States were being accommodated. After full consideration of the matter, the Committee recommended to the Executive Council that a resolution should be forwarded to the Dominion Government recommending, where subsidies are granted steamship lines, that provision should be made to have space held over for Canadian shippers up to a specified period prior to the dates of sailing, say, ten days via the port of Montreal and fifteen days via the port of Halifax.

6. Railway Passenger Fares.

Announcement was made in the Canada Gazette by the railways of maximum rates which they proposed to charge under the Railway Act of 1903, in the absence of special rates or special tariffs. These maximum rates were in many cases on a basis of 3 1-3 cents per mile. A protest was filed with the Board of Railway Commissioners on behalf of the interested members of the Association, against any advance in the present passenger fares as charged by railways. It was explained by the officials of various railway companies that the maximum rates were merely filed in compliance with the requirements of the Railway Act, and that there is no intention of increasing the rates which have heretofore prevailed. Pending any change in the rates charged by the railways, the matter was left in abeyance by the Committee.

7. Demurrage.

The demurrage case has been presented to the Board of Railway Commissioners and the Association's interests fully considered in all its phases. The result has been a complete reorganization of the system of dealing with car service matters. A new set of rules governing the application of demurrage charges has also been agreed upon by the representatives of Canadian railways and this Association. These rules which have been submitted to the Board for approval are considered by your Committee to be fair and equitable as between the shipping public and the railways, and it is confidently hoped will be found to contain ample provision for the various difficulties arising from the application of the former unsatisfactory rules.

MR. PIGGOTT:—We are frequently penalized by the demurrage clause on cars and shipments, but it is a poor rule that wont work both ways. We frequently have shipments that are held up, more especially at junction points, for days and weeks, to the great detriment of the trade and to their very great inconvenience. This is in the hands of a corporation, and we should have some recourse so that we could come back upon the company that wilfully hold goods in transit.

THE PRESIDENT:—That is all covered in the new rules which have been worked out, and which are almost entirely due to the work of our Transportation Manager. I regret he is not here to go into these points with you, but he stated to us at the committee meeting that practically everything we asked for was covered in the new demurrage regulations to which the railroads have agreed. It is now simply a matter for the Railway Commissioners to pass on them and accept them, which they undoubtedly will do, so that I think if we have achieved nothing else than that which you will find effected by the new rules as to demurrage, the Transportation Department has been of great advantage to the Association and to shippers all over the country.

MR. PIGGOTT:—I hope we will all realize the benefit.

Decisions by the Railway Commission.

The following decisions have been made by the Board of Railway Commissioners in respect of complaints brought before that body, all of which are of general interest to the members of the Association.

a. Interswitching.—The intention of the Railway Act is to insure to the public, in addition to freedom from discriminatory and unreasonable rates, a greater measure of that service calculated to convenience the public and promote development of our industrial and agricultural interests. For many years it has been the practice of the railways in some cases to interchange cars to private side tracks, while in other cases this privilege has been denied. The department has given this matter a great deal of attention and has been present at sittings of the Railway Commission in the interests of the Association upon this subject.

The Board has issued judgment in connection with an application for interswitching facilities at London, Ontario, which not only requires the railways to furnish adequate facilities for the free interchange of traffic between their railways at the latter point, but also directs that the cost of service shall be allowed out of the published tariff rates; in other words, the cost of switching is to be absorbed by the railways on both competitive and non-competitive traffic. Another application for interswitching facilities at Lindsay, Ontario, is before the Board, and will doubtless be dealt with in a similar manner. The decision should be instrumental in settling the same vexed question at various other points, like Guelph, Galt, Preston, Hespeler and Berlin.

MR. HENDERSON:—It says in sub-section a, "In other words the cost of switching is to be absorbed by the railways on both competitive and non-competitive traffic." Am I to understand where there are two railways going into a town and having a junction perhaps outside of it, and the first class rate is fifteen cents a hundred, that one railway has to take the cars of the other railway and put them on the switch of a concern whose works are established on the other line? Do I understand that that fifteen cents a hundred will embrace the switching of cars?

MR. HOBSON:—One railway charges the other for doing it.

MR. FLAVELLE:—That is the rule we have in Lindsay.

MR. HENDERSON:—In each city application has to be made?

MR. COCKSHUTT:—Yes.

THE PRESIDENT:—There is just one case which has been brought before the Commission and passed upon by them, and that is in London. It, however, will undoubtedly form a precedent for future judgments in other cases, and it certainly constitutes another very decided victory gained by this department for the shippers of this country.

MR. BLAIN:—Is it the intention of the Association that these cases should be taken up individually? Is there not some means of making it apply to all, and get a general ruling? I would like to know as a member of the Association what the prospect is of having that carried out, and if it is simply an arrangement between the railways, or compulsory on the part of the railways to allow the trains of the other company to go over their switch? What are the features in connection with this inter-switching arrangement? I must confess I don't understand it fully.

MR. COCKSHUTT:—In case of a switching change, the car is placed on the junction switch and one railway hands it over to the other. If it is coming from the C.P.R. and it is a car for use on the G.T.R., it would be placed on the switch and the Grand Trunk engine would come along and take it off and place it on the siding.

MR. BLAIN:—Can we compel that?

MR. COCKSHUTT:—The Railway Commission has compelled it in London.

THE PRESIDENT:—There doesn't seem to be any doubt that the

same judgment will be given in each case. I am sorry Mr. Marlow is not with us. He is with the Railway Commission in Winnipeg. As far as I can make out each town will have to make application and have judgment given in their particular instance, but if three or four judgments have been given I do not think that the railroads will press it to a hearing before the Commission.

MR. COCKSHUTT:—I think the next clause of this inter-switching explains that matter.

MR. ROWLEY:—As I understand there has been only one judgment given by the Railway Commission and that was in the case of London, and as I understand that has been appealed against, I would like to know whether that is the fact?

MR. YOUNGE:—I think the statement made by Mr. Rowley is correct. There has been one judgment and that judgment has been appealed against, but in the following paragraph, which Mr. Cockshutt is just approaching, it will be seen that there is some slight doubt as to the power of the Railway Commission in dealing with this phase of the question. They are given certain powers by the Railway Act of 1903. There is some question in their mind whether they have the right to compel railways to put in inter-switching arrangements. They are asking or will ask at the next session that the Railway Act be amended so as to give them full power to deal absolutely with the question. In the meantime there may be some discussion with regard to this one decision, but the Board's ruling is so absolutely clear in favor of the shippers that there is no doubt as to what the final result will be.

HON. E. J. DAVIS:—What is being done in the meantime? Are the railways compelled to act and allow the switching facilities, pending the appealing of the decision?

MR. HOBSON:—I think their decision will remain in force until judgment has been given by the higher court.

MR. DREWRY:—In the case of Winnipeg the railways there adopt the principle of inter-switching where they own their own sidings, but they have steadily declined to switch cars of individual shippers or switch cars to the public team track. I understand that the idea is to have the matter settled by law so that they will have to treat all alike.

MR. SAUNDERS:—In conversation with Mr. Wiggin a short time ago he said the railway companies under the new Act thought this privilege would be accorded to all railways, that they would be compelled to inter-switch, but they on general principles entered a protest against all encroachments upon their roads or privileges, so that in future if anything occurred in the way of an accident they would be prepared to say they entered a protest.

MR. COCKSHUTT (continuing):

In dealing with this question, it was ascertained that while the Railway Act enables the Board to compel one railway upon the application of another to allow the latter to connect its tracks with those of the former so as to admit of the transfer of cars and thereafter to compel the companies to make such transfers for the accommodation of the public, it is not clear that the Act empowers the Board to enforce the making of connections not specifically asked for by a railway company. On this account, the Committee recommended to the Executive Council that the Dominion Government be asked to consider the expediency of amending the Railway Act of 1903 so as to confer upon the Board of Railway Commissioners power to enforce railways to connect the tracks of their respective lines of railways so as to render possible the mutual transfer of cars and interchange of traffic upon application of manufacturers or other interested shippers, at points where such action is in the judgment of the Board of Railway Commissioners requisite or necessary in the interests of the shipping public.

b. Rates on Export Traffic to the Atlantic Seaboard. The case presented to the Board of Railway Commissioners by the

Dominion Millers' Association and the Transportation Manager of this Association, respecting rates on export traffic from Ontario to Atlantic seaboard points has been decided by the Board.

These export rates are based upon the rates in effect from Chicago to New York, the intermediate territory being charged a certain percentage of such rates. Under the order of the Board, railways are required to substitute for the station groupings and percentages previously adopted and now in use a revised basis of station groupings and percentages which will give to the Ontario shipper the benefit of his geographical position. It is also required that so long as the railways give to United States shippers a lower rate to Montreal than is in effect to New York, a similar difference shall be given in favor of Canadian shippers to Montreal. The decision covers all traffic, including grain and grain products and will satisfactorily remove a source of discrimination against Canadian exporters which has been complained of for some years.

c. Almonte Knitting Case.—Complaint was made respecting the rate on coal from the Niagara frontier to Almonte, a point on the Canadian Pacific Railway seven miles from Carleton Junction. The rate charged to Almonte was \$2.40 per ton, as against a rate of \$2.00 per ton to contiguous and more distant main line points such as Carleton Junction and Ottawa. The decision of the Commission required a reduction in the rate to \$2.00 per ton.

d. Ontario Split Pea Millers' Complaint.—This case was presented by the department on behalf of the pea millers complaining of discrimination in the rates on split peas for export via Atlantic seaboard ports. The decision of the Board required the railways to restore the rates on split peas to the basis of rates in effect upon grain products for export.

e. British Columbia Cedar Case.—Complaint heard before the Board of Railway Commissioners at Vancouver on behalf of the lumber millers on the Pacific Coast of excessive and discriminatory rates on cedar commodities from Pacific Coast mills to points in Manitoba and the North-West Territories. The case was decided by the Board in favor of the complainants and the railways were instructed to cease from charging excessive and discriminatory rates upon cedar. The decision, however, was not accepted by the Canadian Pacific Railway, who announced that they would apply it only to that portion of their line which was under the jurisdiction of the Board. This stand was afterwards abandoned, and the railway announced that it would remove the discrimination complained of by, first, increasing the rate on other lumber commodities, and then reducing the rate upon cedar. This proposal was strenuously objected to by the complainants and considerable correspondence has passed between the department, the British Columbia Lumber and Shingle Manufacturers' Association and the Board of Railway Commissioners on the subject. Negotiations between the complainants and the railway, looking to an amiable adjustment of the difficulty, were brought about through the action of the department and have resulted in an agreement which has been accepted by our interested members as a satisfactory settlement.

The difficulties arising out of this case led the Committee to recommend to the Executive Council that a resolution be forwarded to the Government, suggesting that a ruling be secured from the Supreme Court in respect of the application of sections 251 to 280, inclusive, of the Railway Act of 1903 relating to tolls and charges by railways involving the jurisdiction of the Board of Railway Commissioners under these sections of the Act on that portion of the Canadian Pacific Railway which is claimed by the railway to be exempt from such application and jurisdiction under the terms of the original charter.

f. Flour and Grain Rates.—On behalf of the millers represented in the Association, the attention of the Board of Railway Commissioners was called to an increase in freight rates upon grain and grain products to Maritime Province points, made effective December 5th, 1904, without ten days' notice, as

required by the Railway Act. As a result of the representations of the department, the former rates were restored until the time required for notice under the Act had elapsed. The Board also directed the railways to call for claims and adjust any overcharges arising from the advance without proper notice.

g. Tower Oiled Clothing Company's Complaint.—Owing to refusal by the railways to grant carload rates upon carload shipments of oiled clothing, a complaint was made on behalf of the Tower Oiled Clothing Co., to the Board of Railway Commissioners. After formal hearing, it was decided that the railways should provide carload rates to those points to which carloads are to be shipped.

h. Telfer Brothers' Complaint.—This was a case of excessive rates upon general merchandise shipped from Collingwood to stations on the Canadian Pacific Railway west of North Bay. The matter was dealt with by correspondence with the Board of Railway Commissioners and an adjustment made by reduction of rates from Collingwood and vicinity to the Toronto rate basis. It is also understood a general revision of merchandise tariffs from Ontario points to the territory west of North Bay is now in progress.

MR. ROWLEY:—Were the railways asking more to carry from Collingwood than from Toronto?

MR. COCKSHUTT:—Yes, I think there was a slight increase.

Cases Pending before the Railway Commission.

a. Rates to North Pacific Coast Territory.—The Association's case respecting discrimination in rates on general merchandise and commodities from points in Eastern Canada to points on the Pacific Coast in British Columbia and the United States was heard in conjunction with a similar complaint from Vancouver Board of Trade at a sitting of the Railway Commission in that city in August of last year. Unfortunately, the resignation of the Chairman prevented the Commission from issuing a decision. The case has been set down for re-hearing at New Westminster, B.C., on September 19th.

b. East and Westbound Rates. This important question involves a discrimination in east and westbound rates on general merchandise between points in Ontario, Quebec and the Maritime Provinces. Efforts have been made from time to time to have the railway companies equalize the merchandise rates in both directions. These efforts having failed, the Committee decided, after careful consideration, to report the matter to the Board of Railway Commissioners with a view to securing a definite adjustment. The rates eastbound are generally on a higher basis than those in the westbound direction, although no substantial or reasonable ground has been shown for the discrimination. The eastbound rates are also higher from Ontario shipping points than from United States territory to which these points are intermediate, indicating that the westbound rates are excessive. The question will, no doubt, come up for hearing before the Board of Railway Commissioners in the near future.

c. The Metallic Roofing Company's Case.—This complaint heard before the Board of Railway Commissioners last October, deals with an unauthorized advance in the classification rating of metallic shingles from 7th to 5th class in carloads. The decision of the Board has been delayed owing to the resignation of Mr. Blair from the chairmanship and the illness of commissioner Doctor Mills. It is expected, however, that a decision will shortly be handed down.

MR. YOUNGE:—Since the publication of this report the decision has come to hand and is entirely favorable to the shippers of metallic shingles.

Other Cases Dealt With.

On behalf of interested members, the manager of the department appeared before the Board of Railway Commissioners at Toronto in connection with the Toronto Esplanade Expropriation, and urged along with other bodies that the compensation to

manufacturers affected should be adequate and the basis fixed by the Railway Commission. The Board subsequently decided that the question of compensation should be dealt with by arbitration.

Rates to New Brunswick Branch Line Stations.—Attention of the department was called by Quebec members to excessive rates in effect from that city to points on the Canadian Pacific Railway in New Brunswick north of the main line. The matter was taken up with the interested railway and the basis of arbitrary rates added to main line rates to make through rates into this territory was thoroughly revised, resulting in reductions ranging from 2 cents to 23 cents per 100 pounds in the 1st class basis. The rates from Western Ontario points were reduced to a similar extent. From this latter territory, however, the reduced rates do not yet satisfactorily compare with those in force to Intercolonial stations in the same and more distant territory. The rates to Fredericton, N.B., were also left in an unsatisfactory state in so far as Western Ontario points are concerned. This feature will, no doubt, be subject to further negotiations.

Rates on Barley for Brewing.—The cancellation of rates formerly in effect on barley for brewing purposes was brought to the attention of the Transportation Department by interested members. The matter was taken up direct with the railways and while under discussion a decision by the Board of Railway Commissioners (in the case of the Ontario Farmers' Association), which reduced the rates upon grain to the basis in effect upon grain products, practically restored the former rates in effect on barley for brewing and thus disposed of the complaint.

Rates on Stoves.—By request of interested stove manufacturers, negotiations were undertaken with interested railways looking to a restoration of certain rates upon stoves to eastern points

which had been cancelled. After several conferences, an agreement was reached restoring the rates upon carload shipments, which was acceptable to the interested manufacturers.

MR. T. L. MOFFATT, JR.—This is another clause that shows the value of our Transportation Department. Stoves have been specified as second and fourth class; the United States classification is third and fifth and has been for years. Our Stove Association took matters in hand and we made a private agreement with the railways to put car lots in fifth class, and this arrangement is in working operation now. When we get the less than carload in the third class we shall be satisfied.

Summer Rates for Listowel.—Complaint from interested members at Listowel of the absence of a reduced basis of summer rates from that point was dealt with by the department and resulted in the establishment of the desired rates.

Supplement to Classification.—A supplement to the Canadian classification involving increases, changes and reductions in numerous ratings was submitted to the Board of Railway Commissioners for approval. Protests were forwarded to the Board of Railway Commissioners on behalf of interested members against certain of the changes proposed. The result was that increases proposed in the rating of mixed carloads of shafting and machin-

ery, fire apparatus and iron bedsteads were withdrawn while the proposed additional rating for automobiles in carloads was modified. In addition, a scale of graduated minima based on 10,000 lbs. for the standard 36 ft. car was agreed to and inserted in the classification. Reduced rates were also secured for iron hand pumps, less than carloads; and mixed carloads of leather hames and saddlery and of wire and electrical goods.

Direct negotiations with the classification committee have resulted in reduction of carload rates upon iron and wooden bridges from 5th to 6th class and on sheet iron stoves with cast iron ends from 1st and ½ to 2nd class, less than carloads.

The department is also in correspondence with the railways regarding certain other changes in individual ratings.

Through Bills of Lading to Yukon Territory.—The attention of the department was called to the fact that railways were refusing to issue through bills of lading to the Yukon Territory, and, after correspondence with the White Horse Pass and Yukon route and the Assistant Freight Traffic Manager of the Canadian Pacific Railway, it was arranged that parties desiring through bills of lading to the Yukon Territory could secure the same on application.

Staking on Flat Cars for Lumber.—On behalf of the lumber section, the department has been looking into the requirements of the railways respecting the stakes and cross pieces and the ends of lumber loaded on flat cars. This question is under advisement.

Freight Claims.—We have pleasure in reporting that the department has been able to render valuable aid to members generally in the adjustment of freight claims against railway companies. Members are invited to freely communicate their difficulties in this respect to the Transportation Department. The department has also been able to

render assistance to members in all parts of the Dominion respecting matters of classification, freight rates and the routing of freight to various parts of the world.

During the year the Committee added to its number the following gentlemen: Mr. D. L. McGibbon, The Canadian Rubber Co., Montreal; T. Christie, The Ontario Lime Association, Toronto; Mr. W. H. D. Miller, The Wm. Davies Co., Toronto; Mr. W. J. P. McGregor, The McGregor Harris Co., Ltd., Toronto.

Respectfully submitted,

H. COCKSHUTT,
Chairman.

J. R. MARLOW,
Mgr. Department.

R. J. YOUNGE,
Secretary.

MR. COCKSHUTT:—Mr. President, I have much pleasure in moving the adoption of this report, and in doing so I might say one or two words in connection with it. The Transportation Department has now been running for some time, and I believe it has proved of great benefit to many members of the Association. In fact we hardly realize the good it has done to the general Association, because in one way or another it has been looking after our interests, it has kept down rates, it has helped us on our classifications, and there are many instances given in the report in which it has been very beneficial to the different firms



A TYPICAL FRENCH-CANADIAN FARM.

who are members of the Association. I think we can congratulate ourselves in having a Manager in that department, in the person of Mr. Marlow, who is looking after the interests of the Association. When Mr. Miller, our late manager, resigned, we were able to get him to join the Association and to become a member of the Transportation Committee, so we also have the benefit of his advice. I think the work that the Transportation Committee has been doing and will continue to do has proved and will prove very beneficial to the members of the Association. I have much pleasure in moving the adoption of the report. (Applause.)

MR. DREWRY:—Before the report is adopted if I may be permitted to refer to clause 1 "Classification" under the head of "Mixed car load arrangements west of Port Arthur," I might say that we are not quite able in the West to fully concur in the adoption of this report, which I fancy to-day will be almost unanimous, and I thought it well to put myself on record as saying that we are not quite in a position yet to accept this as the proper solution.

We had a very successful meeting of the branch just before I left. We had Mr. Marlow present, and notwithstanding his wonderful eloquence and the able way in which he was able to place the facts before the branch, we did not feel justified in taking any stand one way or the other while he was there. Our Board of Trade, which is also a very active body in the interests of the West, are experienced in this matter and we were quite willing to leave it in their hands. If Mr. Marlow succeeds in having this classification changed I suppose we will have to abide by it. However, in the West we are a little in doubt as to whether it is in the interests of the western section.

MR. FRASER:—Have the Association ever taken into consideration the advisability of asking the Government to place the express companies under the jurisdiction of the Railway Commission?

We urged upon the Hon. Mr. Blair to place them under the Railway Commission, but for some reason best known to himself he refused to do so. Immediately after the bill was passed, the express companies raised their rates fifty per cent., and we were perfectly helpless. I know whereof I speak. So far as the public are concerned, the insurance companies or any other company I ever heard of are not in it at all. They simply agree together as to what they want and take it, and we are perfectly helpless, and I think if anything could be done along those lines it would afford a great many of us a great deal of satisfaction.

THE PRESIDENT:—In reply to Mr. Fraser I would say that on two occasions this question has been presented to the Government and to the Railway Commission. Nothing has as yet been done. It would be quite in order to send forward another resolution advocating that the express companies should be put under the supervision of the Commission, and if you will send in a resolution to that effect, Mr. Fraser, I am sure it will be received and accepted and endorsed by the Convention.

MR. BRECKON:—I thought the members might be interested in knowing that the decision in the case of the Metallic Roofing Company, so ably looked after by this Department, will mean a saving to our company alone of at least \$3,000 a year.

MR. HENDERSON:—Mr. Chairman, the motion has not yet been seconded, and I take great pleasure in seconding the adoption of the report. In so doing I would like to say that every member of the Association is under a great obligation to the members of this Committee; whether they have received benefits directly or not, they certainly have received indirect benefits, and I think if the members of this Association receive nothing else than the benefit derived from this one particular branch they certainly have received a large return for the expenditure of \$10. (Applause.)

MR. FISHER:—I wish to refer to a clause in section No. 1, but before doing so I should like to express my appreciation of the efforts that this Committee have made and the success of their

efforts. It seems to me there is no question in this broad country of ours of so great importance as that of transportation, and perhaps there is no section of the country that is so much interested in that question as that which I represent, St. John, the Canadian winter port.

I just want to say one word in that connection to the manufacturers gathered here, and to express the hope that the winter port idea, the idea of a Canadian route for Canadian commerce both import and export, shall not in any way be overlooked. The East, sir, has played upon the West in that connection, and if there is any one thing that we in the East consider of the greatest importance to us it is that very thing. If there is any one phase of the development of this country from which we expect to gain in the East it is from the development of the "Canada for Canadians" idea, for Canadian routes, for Canadian commerce, in winter as well as in summer. I think we all recognize that it would be the greatest disaster to this country if anything should arise to impede the course of Canadian traffic through the St. Lawrence gateway for at least six months in the year; and as one I feel that no expense should be spared by this country to improve in every possible degree the safety of the traffic over that great route, so much of our future prosperity depends upon it. For six months in the year this St. Lawrence is sealed and there is only one entrance to this country, and it is to that particular topic that I wish to draw the attention of the members here; that we in the lower province are doing what we can, and we look to the rest of the country to assist us in helping doubtful Canadian commerce in that direction. We are doing what we can and we shall continue to do it, to create those facilities which are requisite. We are sparing no effort in that direction. We are spending of our own money in the city of St. John very freely in order to help to equip that port. We want the backing and support of every true Canadian who feels that the interest of the country is bound up in its commerce and in the diversion of Canadian trade in every particular through Canadian channels.

Owner's Risk.

Referring, sir, to the classification No. 1, the one feature I wish to ask a question about is as to the owner's risk. I am in the stove business, in which risk of breakage is very great, and it is quite a vexed question with us from time to time as to the proper attitude to take in that connection, and perhaps the Manager of the Transportation Department, or Mr. Cockshutt, the Chairman, may be able to throw a little light upon it. I would like to know the status, to what extent the railways have to throw the onus on the shipper, and whether in common law the transportation company taking goods are not entirely responsible?

MR. YOUNGE:—Mr. President, replying to Mr. Fisher's question, I may say that there has been a great deal of time spent already upon the very point that he has raised. It became first a question as to whether it was the duty of an outside organization such as this Association to investigate that very point, or whether on the other hand the Board of Railway Commissioners would be obliged to answer the question fully in case it was asked by some such organization as this Association. It was finally decided that the Board of Railway Commissioners should obtain from the very best legal experts a ruling upon the subject as to what responsibility, in the most definite words, rested upon the railway company. I cannot say just what progress has been made with it, but I know it is one of the subjects now pending before the Commission, and that we can expect before we meet again next year to have some definite decision from the Board of Railway Commissioners upon the subject.

MR. ROWLEY:—May I say in connection with that when I was coming down to this meeting I brought with me a little clipping that will perhaps be of interest. It is what is said by one of the very best authorities in the United States in connection with the uniform bill of lading, and if what he says is correct, I think it will answer Mr. Fisher's question. He says, "The veriest embryo

lawyer will tell you that under the common law a common carrier is liable except for damage by the act of God or a common enemy." I do not think there is any doubt about the liability of the railway to pay for damage, provided it can be shown that the goods are in good condition and were properly loaded, if the shipper loads his own goods.

The company I represent loads all its own goods. We give notice from time to time to the railway people that we intend to continue to load our goods, and if they wish to see whether they are properly loaded or not, it is their business to put a man there. If they do not put a man there they must sign the bill of lading, and they sign the bill of lading on the understanding that they are properly loaded, and we therefore have had no trouble in our business in collecting claims for breakage. They always make the contention that they are not liable, that these goods are loaded by the shipper, and so on, but I don't remember of any instance where we have not been able to recover the amount of our damages. If this matter comes up before the Railway Commission, I think you will find it will probably be dealt with on that basis. The railways have got to do either one of two things. They have either got to take a shipper's goods and load them themselves in their cars or they have got to get the shipper to load them, and I think the Railway Commission will decide that way. They sign the bill of lading, and the owner's risk and all that sort of thing goes for nothing unless they manage to get in the uniform bill of lading.

MR. GORDON:—In supporting what Mr. Rowley says I might state an experience I had some two or three years ago. A friend of mine whom I was very intimate with was traffic manager for one of the large companies in Canada, and in discussing this point with him he stated to me then positively that while those conditions were imposed upon the shippers, the companies themselves did not consider they were worth the paper they were written on. I may say this traffic manager is since dead, so that it cannot go back to him.

THE PRESIDENT:—What Mr. Fisher and all of us would like would be for the Commissioners to rule that the owner's risk clause be taken off the bill of lading entirely. It is put there with the intention of being a bluff to make the shippers think they are responsible, and cannot collect from the company, and it undoubtedly has been worked that way in the past. If we can have it removed I suppose that would meet your idea?

MR. FISHER:—Yes, and I think the Committee should work to that end.

MR. ROWLEY:—Refuse to take that kind of a bill of lading.

MR. BLAIN:—The gentlemen will very likely remember that this owner's risk clause was in force some few years ago. I happened to be Chairman of the Transportation Committee of the Board of Trade in Toronto at the time, and the matter came before me and I had a good deal to do with it. The railway companies were very determined about it, and finally I adopted this means of handling the question. I had our own firm ship all their goods without the owner's risk, at the same time writing our customers not to pay the additional charge but to wire the railway companies every day until their goods were released. That went on a few days, and Mr. Loud came up from Montreal and spent the afternoon with me. He went back to Montreal and discussed the question with Mr. Bosworth, and I got a telegram the next morning stating that it had been withdrawn for the present. That is the last I have heard of that clause. I do not think it has troubled us since, but it is a very important question.

The ground I took with the railway company at the time was that a shipper had no right to relieve the railway companies of their liability, that the very essence of their franchise was to carry and deliver safely the produce of the country; that that was the only obligation they had in return for their public franchise, and I think that is the true position. Because if my neighbor or competitor chooses to give such an absurd condition to

the railway companies and have his goods charged at one-third less than mine—that was the fine at that time, 50 per cent.—I could not possibly compete with him, although he is doing business on a wrong principle. I pointed out to the railway companies that if their charges did not cover their expenses of carrying the goods that they had the right to raise the charges, and that no government and no set of men would object to their being fairly compensated for any service they rendered, but that there was nothing equitable or fair or businesslike about allowing one man to do his business injudiciously while I and everybody else felt he ought to do it on straight solid business lines.

This question ought to be followed up by the Transportation Committee, and we ought to have legislation put upon the Statute books that would prevent the railway companies charging this owner's risk. It is not an owner's risk, it is the carrier's risk, and the carrier should be responsible.

MR. FISHER:—I understand from Mr. Blain that the C.P.R. cancelled it in his case. Was it in his case only, or did it apply generally to his neighbor as well, and when did it happen?

MR. BLAIN:—It applied to everybody. It did not apply to all classes of goods, but on all the bills of lading, on all our receipts that we got from the railway company, we had to stamp across them, "At owner's risk," and if we didn't do that when the goods were delivered the customer he had to pay in addition to the ordinary freight rate fifty per cent. more because the railway companies were carrying it at their risk instead of carrying it at our risk. That was general. It didn't apply to all classes of goods; it applied very largely to the grocery trade, and was a very serious item as freight always is in our line of business.

As Mr. Fisher has just said, this is the most important question that is before the people of Canada to-day, not even excepting the tariff. By discrimination the railway companies might ruin me and build you up if they choose. The tariff applies alike to all.

I am glad to see that the Association is taking such action as they are taking. This is a very able and very satisfactory report. I rejoice to know that we have men that are able to attend to our business along the lines that this report indicates.

THE PRESIDENT:—Every one agrees that this is a magnificent report. Every item in it is of great interest to a large number of people in this country, and it is a regret that every outside member and the gentlemen present here cannot fully realize the amount of work that is represented by each of those little short paragraphs. Some of them have meant days and weeks of work for the Committee and the Manager of that department. My connection with the Committee has been largely academic, our class of goods not being one which is largely affected by freights, and I have not felt I had any direct actual interest in it as a shipper.

I am very glad to say that for the following year we will have as a member of this Committee Mr. Hugh Blain, who has had a great deal of experience as Chairman of the Transportation Committee of the Toronto Board of Trade, as well as a number of other gentlemen who have done good work on it during the past year.

The President then put the motion: "Moved by Mr. Cockshutt and seconded by Mr. Henderson, that the Report of the Railway and Transportation Committee be adopted," which upon a vote having been taken was declared carried.

After the reading of some announcements the convention adjourned to meet at 2 p.m.

At 2 o'clock p.m., the President called the Convention to order and said: In the absence of the Chairman of the Reception and Membership Committee, Mr. Crean, who has served in that capacity for the past two years and done efficient and good work, I am going to call on Mr. Dusseau, who is also one of the most energetic members we have had on the Reception and Membership Committee, to read the report.

MR. L. V. DUSSEAU:—I am sorry that the Chairman of this committee is not present, because I feel sure that he would have done justice to a task to which I feel myself unequal. However, I shall do my best.

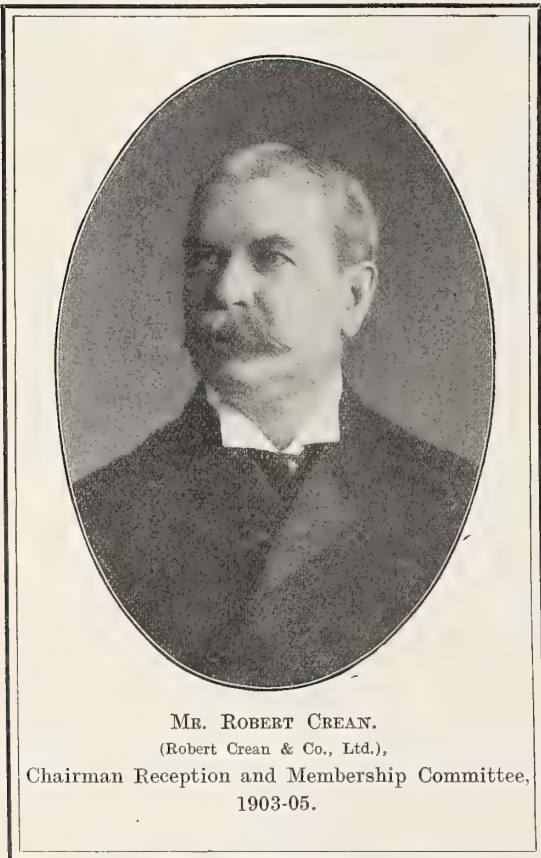
REPORT OF THE RECEPTION AND MEMBERSHIP COMMITTEE.

Your Reception and Membership Committee have held seventeen meetings during the year and are pleased to report a successful and progressive year's work.

Membership.

The membership of the Association has increased during the year from 1,511 to 1,839, a net increase of 328. This increase is larger than that of any of the three previous years, and is exceeded only by one other year in the history of the Association.

Since the end of the Association year, July 31, your Com-



MR. ROBERT CREAN.
(Robert Crean & Co., Ltd.),
Chairman Reception and Membership Committee,
1903-05.

mittee has approved of 37 new applications, making our actual membership to-day 1,876.

The membership by provinces on July 31st was as follows:—

Ontario.	1125
Quebec.	479
Nova Scotia.	93
British Columbia.	65
New Brunswick.	31
Manitoba.	35
North-West Territories.	7
Prince Edward Island.	4

1,839

Of these 1,839 members, 291 come under Class B, being firms employing 100 or more hands, and paying an annual fee of \$25.00.

The splendid increase in membership which your Committee is able to report has not been obtained without earnest and

constant effort, and we desire to record our appreciation of the assistance given by many interested members in all parts of the Dominion who have contributed to so satisfactory a result.

British Excursion.

Carrying out the wishes expressed through a resolution at the last annual meeting, your Committee organized an excursion to Great Britain, the success of which is known throughout the Empire and the results from which promise much for Canada and her Imperial relations. The party numbering 278 was the largest which had ever visited the Motherland from Canada, and included a number of the Association's officers and representative members from every part of the Dominion. They were personally welcomed to Great Britain by their Gracious Majesties, the King and Queen, and were enthusiastically received at a large number of the leading manufacturing centres, in an elaborate tour arranged and personally conducted by the officers of the London Chamber of Commerce. The party also visited Paris, where they were splendidly entertained by the national and civic authorities.

It is the earnest hope of your Committee that so important an enterprise may be followed by correspondingly great results in increasing the trade between Great Britain and Canada, and in bringing to the Dominion a much larger share of British population and capital.

Local Banquets.

In addition to the excellent work accomplished by the local branches of the Association in bringing the members together, your Committee held special functions during the year in both London and Toronto, and with the able assistance of a local committee, arranged a very pleasant and profitable series of semi-monthly luncheons for the members in Hamilton.

Too much emphasis can scarcely be laid upon the many benefits following such local meetings, and we hope the members in other centres will organize for similar purposes during the coming winter.

Welcome to Their Excellencies.

Your Committee had the honor of arranging for the presentation of an address of welcome to their Excellencies, the Governor-General and Lady Grey, on the occasion of their first visit to Toronto, a token of greeting which was graciously received.

Membership Qualifications.

Recognizing that the interpretation placed upon the Association's By-law respecting "membership" has allowed too much latitude in the question of qualification for membership, your Committee undertook to recommend to the Executive Council an amendment which was adopted by that body, and which has been placed in the hands of the members for discussion at this meeting.

Conclusion.

In concluding this report your Committee desires to impress upon the members the duty which they owe to the Association and to request that they may co-operate heartily with the new Reception and Membership Committee in securing a much larger increase in membership during the coming year.

Respectfully submitted,

ROBERT CREAN,
Chairman.

R. J. YOUNGE.
Secretary.

MR. DUSSEAU:—I have much pleasure in moving the adoption of the report.

Qualifications for Membership.

MR. HENDERSON:—Before that is carried, Mr. President, may I ask what that resolution is that is submitted for discussion?

MR. TINDALL:—I have it here, Mr. President. I will read it: "That the clause relating to active members shall read as follows:

"Active membership in the Association shall be open to individuals, firms, and corporations actively engaged as manufacturers in the Dominion of Canada; and when such individuals, firms, and corporations are not engaged exclusively in manufacturing, it shall be the duty of the Reception and Membership Committee of the Association to decide and report to the Executive Council whether the manufacturing interests represented in each case are proportionately large enough to warrant the acceptance of the application.

"Members may have more than one representative provided that the individual representatives named in each instance are actively engaged with and give the greater portion of their time to manufacturing industries.

"Candidates for active membership shall sign an application. This application shall be forwarded to the Secretary, and shall be acted upon by the Executive Council after report by the Reception and Membership Committee.

MR. J. J. MCGILL:—I think that is a very necessary amendment to our present regulations, for the simple reason that in Montreal there are continually numbers applying for membership who have no right to be members of this Association. And it has been very hard to designate how far we could go in that direction.

MR. ROWLEY:—Am I right in supposing that this suggested amendment to the qualifications for membership would not be retroactive; it would have no effect upon members now in good standing?

THE PRESIDENT:—That I suppose could be decided by the Convention. It was not the intention of the committee at the time to recommend it should be retroactive, but to guard against any further incursion of those who might not be considered fully qualified; and as the others gradually drop out they should be eliminated in that way.

MR. ROWLEY:—There was a time when we were glad to have members—very glad to have them and get their money, and very glad to have their support and countenance, and I hope the committee will look upon it in that way. If it is not improper to discuss this report I would like to make a suggestion to the incoming committee, that they do not forget that the time was when we wanted these people as our friends and supporters and no action should be taken as to their membership.

MR. WM. A. MARSH:—I would like to ask whether the representatives of large manufacturing concerns are not eligible as members of the Manufacturers' Association in that city in which they are located?

THE PRESIDENT:—If I understand your question aright they are. They would be covered by the second clause.

I might say I do not think there is any danger in connection with any members that we may at present have in the Association, or any harm to fear from what has been done in the past, but to be very frank, what brought this question up was the trip to Great Britain this summer. That was, of course, a very alluring expedition, and a great many were anxious to join the Association simply for the purpose of visiting England with that party. Not a few were nominated as second members of firms already in the Association, and there was no specification in the past as to what should guide the committee. For that reason they drafted this clause and submitted it to you to be taken up to-morrow morning among the amendments to the Constitution, so that we might leave the general discussion of it until that time.

MR. S. M. WICKETT:—I beg to second the adoption of the report.

The President put the motion to receive and adopt the report which on a vote having been taken was declared carried.

THE PRESIDENT:—I will call upon Mr. A. S. Rogers to read the report of the Committee on Commercial Intelligence.

REPORT OF THE COMMERCIAL INTELLIGENCE COMMITTEE.

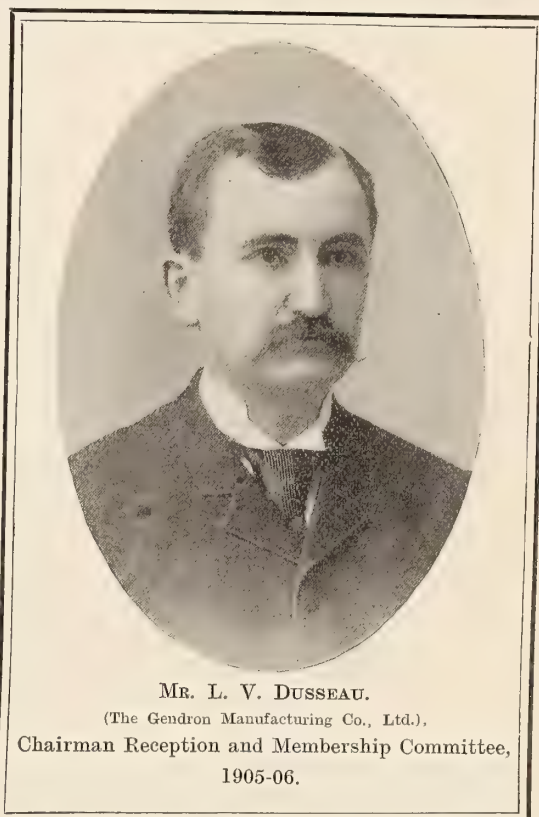
Your Commercial Intelligence Committee begs to present its annual report as follows:—

Canadian Commercial Agency System.

The commercial agency system of the Dominion Government is being gradually extended, and the reports and services of the agents are being put to more practical use.

Agents have been appointed since our last annual meeting to two new fields—Mr. A. W. Donly in Mexico and Mr. E. D. Arnaud in Chicago. Representation in Mexico should be very beneficial, but we doubt if there is enough interest taken by Canadians in the Chicago market to justify a permanent appointment in that centre.

The reports of the agents are published weekly by the Department of Trade and Commerce, and are much more valuable to the exporters than when published in the monthly report as formerly.



The department too has recognized the importance of having its commercial agents visit Canada at regular intervals, a feature which the Association has urged for some time, and Mr. J. S. Larke, the agent for New South Wales, Queensland and New Zealand has spent four months in Canada during the past summer giving advice on export trade to Australia and New Zealand and becoming better acquainted with Canadian products.

Mr. C. M. Kittson, appointed to take the place of the late Mr. J. G. Jardine in South Africa, visited the Association and a number of exporting manufacturers before leaving to take up his work. We cannot urge too strongly the importance of the commercial agents making such visits at regular intervals. Unless they do they cannot represent Canada with satisfaction either to the foreign importer or the Canadian exporter.

Technical Education.

At the last annual meeting of the Association it was unanimously resolved "that the Association should, through a special committee, investigate the subject of technical education as it is dealt with in other countries with a view to recommending early action on the part of the Dominion Government in inaugurating

a national movement for a standard system of technical education in Canada." Your Committee selected a special committee to report as outlined in this resolution, and their finding is before the convention for consideration.

An article on "Technical Education in Canada," dealing with the position of that branch of education and offering suggestions for improvements, was published in *INDUSTRIAL CANADA* of January, 1905.

Metric System.

The best arguments for and against the adoption of the metric system that the Association has been able to procure have been given to the members from time to time through the columns of *INDUSTRIAL CANADA*. The report and discussion at the last annual meeting showed that there was a wide difference of opinion whether or not any action should be taken, and it was left an open question. In January, 1905, a letter was published from Mr. E. Johnson, secretary of the Decimal Association of Great Britain, supporting the metric system. An article, "A Protest Against the Metric System," by Mr. Samuel S. Dale,

tion the Canadian Government erected a pavilion and made a display that has reflected great credit upon Canada. Splendid results in both trade and emigration will undoubtedly follow. A number of copies of the Canadian Trade Index were distributed by the officers in charge.

An International Exhibition of Arts and Industries, extending over the months of September, October and November, is now being held at Brussels, Belgium.

A Colonial Exposition will be held in Marseilles in 1906. An expensive site has already been secured, and the different French colonies have voted \$965,000 towards the expenses of making displays.

An International Exhibition of more than ordinary importance is to be held in Christchurch, New Zealand, from December, 1906, to April, 1907. This will be directly under the patronage of the New Zealand Government and special inducements are to be extended to attract foreign exhibits. No charge will be made for space, and special freight rates will likely be announced in the near future.

The Imperial Japanese Consul for Canada has called to the attention of the Association the Imperial Commercial Museums of Tokio. These have been established for the past fifteen years for the purpose of exhibiting foreign goods, and Canadian manufacturers may now take advantage of the facilities if they wish to do so.

Your Committee feel that such important exhibitions as these are worthy of attention, since they can be used as an effective means for introducing Canadian goods.

Canadian Trade Index.

Your Committee has undertaken the publication of a fourth edition of the Canadian Trade Index. The Index has proven to be of the greatest assistance in the development of Canada's export trade. It is now recognized as a standard reference work, and requests are received for copies from merchants in every important trade centre of the world. The general style and appearance of the Index will be maintained, but it will be larger and contain more information than any of the previous issues. The publication is being supervised by a special committee consisting of Messrs. T. A. Russell, Wm. Stone and H. G. Nicholls. The work of compilation and advertising is well under way.

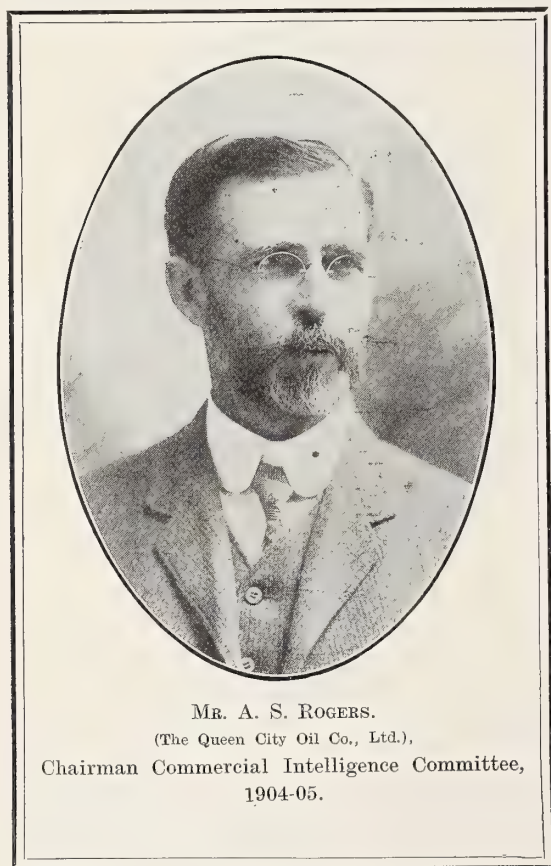
Foreign Trade Enquiries.

Largely as a result of the distribution of the Index the Association has been in correspondence with many foreign firms who wish either to purchase goods in Canada or to act as agents for Canadian firms abroad. For the year ending July 31st 417 inquiries have been received from firms wishing to purchase or asking for information regarding 1,034 different articles. 1,337 advices regarding these inquiries have been forwarded to members of the Association, and in a large number of instances it is known that direct business has resulted.

Commercial Information Reports.

The foreign correspondence of the Association is constantly increasing. This is due largely to the circulation of the Trade Index and also to the growing recognition and prestige of the Association. The Association has its own accredited correspondents in Great Britain, Australia, New Zealand, South Africa, West India Islands, Holland, Germany, Switzerland, Denmark, Scandinavia, Egypt and Japan, seven of which have been appointed this year. The various commercial agents of the Dominion Government also render valuable assistance. In addition to procuring general information, facilities are provided for securing commercial and financial reports at nominal rates.

The Foreign Trade Department is prepared also to translate foreign letters and catalogues into English, and English letters and catalogues into any foreign language. These facilities are now being widely used by the members of the Association.



MR. A. S. ROGERS.

(The Queen City Oil Co., Ltd.),

Chairman Commercial Intelligence Committee,
1904-05.

Boston, the editor of the *Textile Record*, was published in April. In the July number Mr. Ch.-Ed. Guillaume, sub-director of the International Bureau of Weights and Measures, Paris, France, supports the system, and Prof. N. F. Dupuis, of Queen's University, Kingston, advances arguments in the August issue against the adoption. These contributions, we feel, are keeping before the members of the Association the most up-to-date arguments for and against the adoption of the system, and will materially assist them in expressing their opinions intelligently upon this question when the time comes for an authoritative statement from the Association.

Exhibitions.

The Committee has endeavored to keep prominently before the members of the Association the announcements of foreign exhibitions, and attention has been called to the following:—

The International Exhibition of Arts and Manufacturers, held at Liege, Belgium, from May to October, 1905. At this Exhibi-

Trade and Navigation Returns.

Owing to the development of manufacturing, the classification of articles in the Dominion Trade and Navigation Reports does not, in a large number of instances, give information of maximum value to the manufacturers, because the specific articles are not mentioned, or are included under general headings. The members were consulted regarding the changes they considered necessary, and the Committee recommended to the Customs Department such as were approved of. While these changes, generally speaking, met with the approval of the Government, they were not put into effect, for the reason, as given by the department, "that in view of the probable entire revision of the tariff at an early date, which revision requires changes in the statistical classification, it would be better to defer action for another year. This ruling was generally accepted by the members.

Trade With Japan.

The Japanese tariff gives to a number of important manufacturing nations certain concessions. These have been arranged by treaties to which Canada is not a party. This condition was pointed out to the Government in 1903 with the suggestion that an effort be made to secure for Canada similar favorable treatment. We are pleased to report that in June of this year Hon. Sydney Fisher stated in Parliament that negotiations to this end were being carried on with the Japanese Government which would likely end satisfactorily. Should they do so, the Japanese tariff against Canada will be reduced on hides, leather, leather goods, condensed milk, sugar, live stock, cotton and woollen goods, paper, enamelware, rubber goods, hats and caps, and other lines.

Preferential Tariff.

The sister colonies of New Zealand and South Africa have granted preferential tariffs to Canada in return for Canada's preference. The New Zealand preference was arranged by increasing the general tariff on specific items against foreign countries. In South Africa the preference is on a percentage basis, on some articles 10 per cent., and on others 25 per cent., is allowed off the tariff schedule. These have done much to attract the attention of Canadian exporters.

The Committee has received information to the effect that an effort is being made to extend the list of articles on which a preference is given in both South Africa and New Zealand, and that in Australia the newly elected Premier will give his early attention to the introduction of a preferential measure.

This is the third report of the Commercial Intelligence Committee that has referred to the very unsatisfactory parcel post arrangements between Canada and Trinidad. The rate is 34c. for the first pound, 42c. for two pounds, and all parcels have to go by England. The rates are excessive and the length of time for delivery unreasonable. The rate by direct route to Barbadoes is 20c. per pound, to British Guiana 16c., to Jamaica 20c., and to the other West Indian points similar amounts. We sincerely trust that the Dominion Government will succeed in having the Trinidad rate lowered in the near future, particularly in view of the fact that the direct steamship line from Canada receives a subsidy of \$60,000 per annum from the Canadian Government.

Congress of Chambers of Commerce.

The London, England, Chamber of Commerce has convened the Sixth Congress of Chambers of Commerce of the Empire, to be held in London in June, 1906. The Association has been invited to appoint delegates to the Congress, which invitation the Executive Council has been pleased to accept, and the delegates will be named at a later date. The resolutions to be advanced by the Association will be considered by the Executive Council before being presented to the Congress.

Viewed as a whole, the year just closed shows considerable progress in the expansion of Canadian manufactures, and it is encouraging to find that, during the past year, the exports of manufactured goods show an increase of nearly \$2,000,000.

The Commercial Intelligence Department is heartily recom-

mended to the members of the Association—indeed, only those members who use the facilities provided for them can appreciate its value.

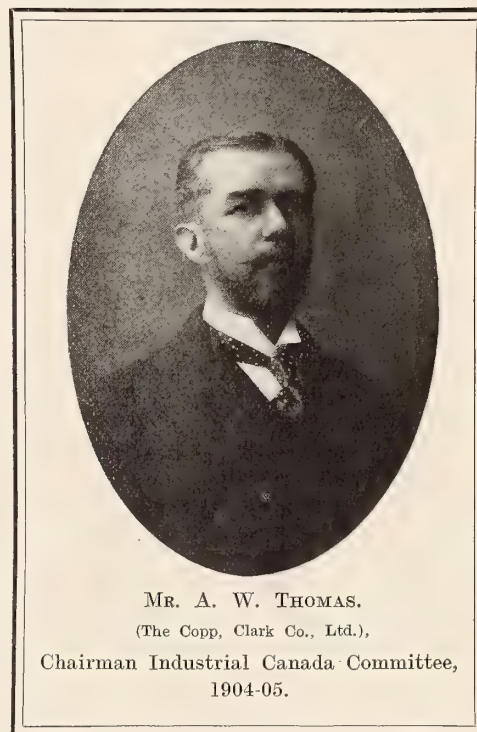
Respectfully submitted,

A. S. ROGERS,
Chairman.

R. J. YOUNGE,
Secretary.

MR. A. S. ROGERS:—It is not necessary for me to add anything to this report except to say that, while the work of this committee does not compare in importance with that of the committees whose work we were discussing this morning, yet there are some parts of the work that might be made very helpful to the Association, particularly this work on commercial information. Many of the larger exporters have their own agencies in foreign countries, and to them it is not of so much importance, but to the smaller exporters, if they would look into it, this department might be found of very great service, perhaps giving information to enable them to open up new markets.

I wish to express my appreciation of the work of the Secretary. The detail of this department has been handled very largely



by him, and my thanks and the thanks of the committee are due to him and to Mr. Stewart who acted in his absence. I move the adoption of the report.

The Liege Exhibition.

MR. BURTON:—I would like to second the motion. While I was away I was told by a gentleman not interested at all in manufacturing, or anything of that kind, that at Liège, the Canadian Exhibit was the best of the whole lot; that the information there given for the use of people who might wish to come out to this country respecting the price of land, the average production per acre, etc., was given in a complete and satisfactory form. This gentleman, although not acquainted with our country, brought the matter up in the ordinary course of conversation, and I thought it well worth mentioning here.

THE PRESIDENT:—I might say in reference to what Mr. Burton has said, that some of our members on the trip to Europe this summer went to the Liège Exhibition, and they all bear the same sort of testimony. One gentleman said he thought it was one of the best advertisements Canada had ever had on the Continent; that on the train going back and forth to Brussels, while he unfortunately could not understand the language being

used, he could hear the word "Canada," "Canada," on all sides and by almost every person on the train; and there seemed to be on all sides a very large amount of interest taken in the Canadian Exhibit.

The possible advantages of this department to many of our members who have not, as yet, established the necessary machinery for carrying on an export business may not be known, and they, therefore, do not know how to get over the trials and tribulations of undertaking that first establishment. This department is at their service. This department will help them very materially. The correspondents which the Association has arranged for in different parts of the world, in different trade centres, will advise as to what possibilities there is for trade in any particular line in their district; they will also forward the names of possible customers, and give as far as possible a record of their financial standing. So that in that way this department can be of very material assistance to our members.

I will put the motion, moved by the Chairman, Mr. Rogers, seconded by Mr. Burton, that this report be received and adopted. (Carried).

I will now call on Mr. A. W. Thomas, Chairman of INDUSTRIAL CANADA Committee to read the report of that committee.

REPORT OF THE INDUSTRIAL CANADA COMMITTEE.

Your INDUSTRIAL CANADA Committee has pleasure in giving you a few details regarding the editorial and business work of your official organ. We are hopeful that INDUSTRIAL CANADA, which has been regularly sent to each member, has taken with it its own message of growth, improved typographical appearance, a larger number of interesting and instructive articles, a careful record of the work of the Association in all its departments, and editorial views that have met with general approval. Nothing can speak more satisfactorily regarding the reception of INDUSTRIAL CANADA by the business public than its advertising columns, which are increasing each month, and which are made use of by many of the most enterprising of our members.

Your Committee has held ten meetings, each of which has been well attended. The business details considered, such as contracts for paper and printing, advertising rates and commissions, may not be of interest. We have endeavored to give our first care to reporting the Association's work but have not neglected other features. Each month a special article on some live topic has been published. Some of these were,—The Chemical Industries of the Dominion, 1905, by Prof. W. R. Lang of the University of Toronto; Reciprocity, A Dream of the Past, by Hon. W. H. Montague; Protest against the Metric System, by S. S. Dale; Smoke Consumers and Fuel Gases, by Jas. Milne, M.E., E.E.; Economy of Isolated Plants, by K. L. Aitken; Peat Fuel, by W. E. H. Carter; The Tanning Industry in Canada, Power Development at Niagara, Technical Education in Canada, and others.

In connection with the British Excursion, the committee published a special British Excursion Number. This was printed on coated paper, given a special cover design, and contained one hundred and sixty pages. The reading matter constituted what we believe to be the most comprehensive and instructive treatise on manufacturing in Canada ever published. Ten thousand copies were distributed, one half of which went to Great Britain. The issue was not a success financially, but at the same time we are satisfied that from a Canadian and an Association standpoint, the small deficit was a splendid investment.

Some of the more important steps taken by the Committee during the year were:—

- (1) The appointment of an advertising manager for the Dominion.
- (2) An increase in the advertising rates, justified by the increased size and circulation of the paper.

- (3) The introduction of three new columns—"Insurance," "Literature for Busy Men," and "Correspondence."
- (4) The entire change in the typography of the card advertisements.
- (5) The unanimous adoption of a new cover design executed by two members of the committee, and which will be first used in September 1905 issue.

Size and Circulation—The volume of INDUSTRIAL CANADA for the year just closed, (Volume V.), contained 800 pages, an increase of 192 pages over Volume IV. or an average increase of 16 pages per issue. The increase in circulation has also been very satisfactory. Last year 49,000 copies were printed and distributed, this year an increase of exactly 10,000 has been made. Our monthly average circulation lacks less than one hundred copies of 5,000 per month. This is a monthly average increase for the year of about 800 copies.

Finances—With the growth in pages and in circulation the cost of publication has increased materially. As you have seen from the Treasurer's Report, the expenditure on INDUSTRIAL CANADA this year has been \$12,000 or \$1,000 per month. We regret to have to report that our earnings have fallen short of this amount by \$1,000, \$600 of which is accounted for by deficit on the British Excursion Number. We believe, however, that INDUSTRIAL CANADA should be given credit for the 1,839 copies which are sent to the members of the Association and for which no revenue is received. A small charge of 50 cents per annum per member, from the general revenue of the Association, would about equal the deficit we have to report. We are pleased to be able to state, that we believe the paper to be now on a paying basis. The earnings of the August issue were considerably in excess of the expenditure, and we are hopeful with the largely increased amount of advertising now appearing in INDUSTRIAL CANADA, that from now on the paper will be able without difficulty to show a balance on the right side.

Your committee believes that INDUSTRIAL CANADA has attained such a status in the world of Canadian publications that it is becoming each year a more and more valuable asset for the Association. As the organ of the Association, it carries great weight and we are satisfied that no journal of a similar size and age is more frequently referred to.

During the year, the committee was sorry to lose the services of Mr. G. A. Howell, who found it necessary to resign. Mr. T. L. Moffat, Jr. and Mr. C. F. Wheaton, were added to the committee and rendered valuable assistance.

In closing, we wish to express a brief word of appreciation for the services of the Editor of INDUSTRIAL CANADA, Mr. G. M. Murray. His ability for the work he has in charge is exceptional and it is with satisfaction we note that his services are available for the coming year.

All of which is submitted,

A. W. THOMAS,
Chairman.

R. J. YOUNGE,
Secretary.

MR. THOMAS:—I have much pleasure in moving the adoption of the report.

MR. RUSSELL:—I have pleasure in seconding the adoption of the report. I think there are few more valuable assets in the Association than INDUSTRIAL CANADA. The great difficulty in holding together an organization is the difficulty in keeping the members posted on the work that is being done when those members are not directly identified with the work. All of us who serve on committees or attend these conventions are so well acquainted with the work of the Association as it is being carried out that our enthusiasm never has an opportunity to lag. But the big rank and file of our members, ninety per cent. of whom are not serving in any way, are apt to think of the Association only as they are called upon to pay the fee, and in no other way could we have so valuable a means of keeping them

acquainted as we have through this publication. During the past year, under the able management of this committee, *INDUSTRIAL CANADA* has passed beyond the mere bulletin stage of keeping members posted. In addition to doing that, it is incorporating valuable articles on practical questions, and I think another year will see further expansion along this line, by the publication not only of Association doings, but of an ever increasing number of practical articles of value. I have the greatest pleasure in seconding the adoption of this report.

MR. DREWRY:—I would like to bear testimony to the great value I think we have in this publication. As one who is too remote to attend committee meetings, I think it is really the link that binds us to the parent Association. Every month we get the reports of what has been going on, and I have taken very great pleasure and interest indeed in reading these reports and reading the addresses delivered from time to time before the Association at different meetings in the East. I believe I am a member of some of the committees, but being so far away it is utterly impossible to attend them, and it is through the medium of *INDUSTRIAL CANADA* that I am kept informed. I want to give the committee, whoever they are, in charge of this publication, the greatest possible credit for the way that it and everything that emanates from that office is gotten up; all their circulars and folders are gotten up, I believe, in the most artistic way, and are printed on the finest paper. I believe it pays, because it stamps the work as being first-class from beginning to end. I hope that *INDUSTRIAL CANADA* will go on and grow, and be most successful.

As to the suggestion of charging fifty cents per member, I have some little doubt as to whether that is a wise course. It seems to me the primary object of this paper is to educate the manufacturers as to what is in their best interests, and it is essential to get it to the hands of all it can possibly reach.

MR. THOMAS:—I would like to set Mr. Drewry right on that point. The committee do not recommend that we should charge fifty cents. That clause in the report was simply an explanation of what the paper has, in the past year, cost each member. That is to say, if we had charged fifty cents a member, we would have no deficit; but the feeling of the committee last year was not at all in favour of charging for the paper.

I would like to add, while I am on my feet, that it may cost us more in the coming year if we have to increase our editorial staff at all; but even if it does, I am quite sure the Association is perfectly willing to pay it out of the general funds. So that, as has been well said by the last two or three speakers, it is one of the most valuable assets in a sense that we have, although it contradicts the term to call the publication that shows a deficit an asset. It is an asset in one sense and a very valuable one.

MR. HENDERSON:—Would the question of charge for this paper come under the purview of the Finance Committee? I think every one here will bear the highest testimony to the usefulness of that paper. I think the paper and the committee are worthy of the highest praise, because I don't think there is any paper published in the world that is its equal.

MR. BOOTH:—I wish to bear my testimony to the way in which the office staff has worked this year on *INDUSTRIAL CANADA*, and notwithstanding that the past year shows a deficit, taking the paper from its inception we only show a deficit of \$5 on the whole transaction.

The President put the motion to adopt the report which, on a vote having been taken, was declared carried.

The President called upon the Secretary to read communications which he had received.

THE SECRETARY:—We have received a number of very nice letters from members of the Association who are unable to be present at this Convention. Since I have come here, I have received regrets from: R. O. McCulloch, Galt; C. H. R. Warnock, Galt; J. Hewton, Kingston; M. Kennedy, Owen Sound; F. K.

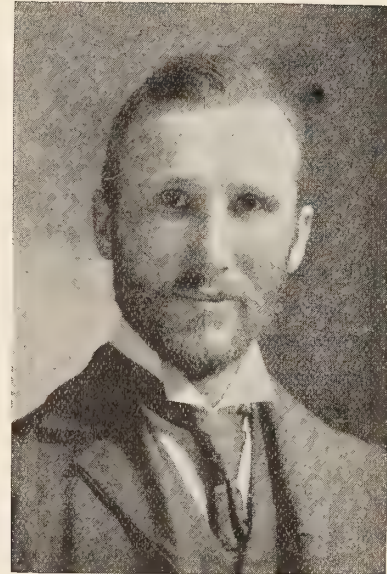
Bell, St. George; D. Murphy, Ottawa; T. H. Estabrooks, St. John, N.B.; F. H. Whitton, Hamilton; J. Stevely, London; W. P. Gundy, Toronto; C. N. Candee, Toronto; Lt.-Col. Gartshore, London, and others.

In addition to these, I have received two letters which bear upon the work of the convention, and show the interest of the men who cannot be present; one from Mr. E. B. Eddy, of the E. B. Eddy Company, Limited, of Hull, and the other from Mr. P. W. Ellis, Toronto.

MR. BOOTH:—We miss from our midst, to-day, an old and faithful member; I refer to Mr. Cyrus W. Birge. On my way down I met him in Montreal. He was intending to be here, but was taken ill, and much to our regret and your regret he could not attend.

THE PRESIDENT:—Mr. Birge got as far as Quebec, but he is laid up in the hotel unable to be present. I am sure we will join with you in expressing our regret that such is the case. He is progressing favorably and hopes to be about before very long.

At 3 p.m., the Convention adjourned.



MR. THOS. RODEN.
(Roden Bros.),

Chairman Commercial Intelligence Committee,
1905-06

Wednesday, September 20th.

At 10 o'clock, a.m., the President took the chair and called the Convention to order.

THE PRESIDENT:—In the absence of the Chairman of the Committee on Technical Education, I will call upon the Secretary to read the report of that committee.

REPORT OF THE TECHNICAL EDUCATION COMMITTEE.

At the 1904 Annual Meeting of the Association a resolution dealing with the subject of Technical Education was passed as follows:—

"Whereas the importance of technical education to the manufacturing industries warrants and requires the establishing of modern, thoroughly equipped technical schools throughout Canada,

"And whereas, the instituting of a general system with one standard curriculum requires that all the schools should be under one central management;

"And whereas, it is the function of the Federal Government alone to properly organize such a system of schools throughout the Dominion;

"Therefore, be it resolved, that the Association should, through a special committee, investigate the subject of technical education as it is dealt with in other countries with a view to recommending early action on the part of the Dominion Government in inaugurating a national movement for a standard system of technical education in Canada."

In accordance with this resolution the Executive Council appointed a Committee which has given much time and study to this important question and which begs to present this report.

The resolution as above may appear to conflict with the educational clauses of the British North America Act, which provide that education shall be a matter under the control of the Provincial Governments. The Committee, however, consider that Technical Education is something quite different from the education provided for under the Act. Technical Education is closely identified with the growth of Canadian industries and the development of Canadian trade, and consequently becomes a national subject. The instruction given on the agricultural farms of the Dominion is Technical Education, pure and simple, and is carried out under the supervision of the Dominion Government Department of Agriculture. In the same manner, your committee are of the opinion that Technical Education as applied to the manufacturing industries, properly comes under the supervision of the Department of Trade and Commerce of the Dominion Government.

Your committee have made careful enquiries regarding the importance of Technical Education in the three countries in which it has reached its highest development,—Germany, England and the United States. In each of these, it is recognized as a prime necessity and it is generally admitted that the development of manufacturing is becoming each year more dependent on the trained and expert help that is educated in the different technical colleges. The country that to-day is catering for an export trade, or in fact, competing with foreigners at home, and is doing so without continually augmenting its force of expert help, is waging a battle against overwhelming odds.

Canada, we regret, has hardly made a start. True, there are some towns that are teaching a few first principles of Technical Education, but there is not a single school in Canada that approaches the standards set in the countries named. The distinctive feature, if there really is one, of Technical Education in Canada, is that it has started in our Universities and that it is a Technical Professional Training that is provided, rather than a training for the workingman. Our large cities are probably the greatest offenders because greater opportunities have been presented. Leading business men of Montreal have been endeavoring for some time past to organize a Technical Institute on a creditable scale, but unfortunately up to date nothing definite has been accomplished. In Toronto there is a municipal Technical School and the city has, by establishing the same, recognized the necessity for Technical Education. The training is good, as far as it goes, but it is only elementary and does not provide the expert assistants that are everywhere needed. The committee have concluded that Canada has as yet only made a very slight beginning.

Conditions in Germany.

The Imperial Government of Germany has carefully fostered the widest kind of the higher Technical Education. It has developed its system up to its present standard through its Department of Trade and Commerce. Its grants to the Tech-

nical High Schools and Universities in aid of scientific and technical training amount to no less than \$155 per student per annum in the case of the universities, and \$90 per student per annum in the case of the Technical High Schools. The Elementary Trade and Manual Training Schools, however, do not apparently interest the Government: and although there appears to be much less uniformity in the case of these schools than among the higher Educational Institutions, the support in general may be said to come from the municipalities and from subscriptions by manufacturers.

Great Britain.

It is a noticeable fact that many industrial districts in England have their Technical Schools treating particularly upon the industries of the particular locality, which localities are the mainstay of their several schools. During the fiscal year 1902-3 there was expended in England and Wales on Technical Schools the sum of £1,101,998, an increase of £140,576 since the year 1900-1. It is proposed that in the town of Bradford the sum of £40,000 be expended for the erection of efficient work-shops for students taking up theoretical technical courses. This sum is to be raised by the municipality and private subscription. A number of guilds and companies and manufacturers give substantial endowments, monetary assistance and plant for support and maintenance of the various schools in which they are particularly interested, as for example the Draper Company, The Goldsmiths' Company, the Clothmakers' Company, and others.

A noticeable development of recent years is that of the trade schools which give instruction in special trades, and which, according to all reports, have been successful. In London alone, there are 313 schools giving instruction in different trades.

The increasing importance of Technical training in England may be well gauged by the expenditure. Since the establishment of the Technical Board of Education of the London County Council in 1893-4 the expenditure of that Board has increased from £4,528 in that year to £305,212 in 1903-4.

The United States.

In the United States the adoption of Technical Education has been more recent and has grown more rapidly than in either Germany or Great Britain.*

Scientific education for agriculture and the mechanical arts may be said to have received its first Government acknowledgment in the United States in 1862. Except for agriculture the sixty colleges then in existence were mainly technological and benefits indirect rather than industrial. Industrial drawing was introduced into the Massachusetts Schools in 1870, the really first attempt at industrial education in the United States. What is still one of the most important schools in the United States, the Philadelphia Textile School, was opened in 1884. Here young men are given a training which thoroughly equips them to step into a factory and superintend the manufacture of textiles from the selecting and buying of wool or cotton until it is manufactured into the finest fabrics.

The schools that are now established in most of the important centres are the result of local and individual effort and no uniformity of system or management exists. Funds for their maintenance have been secured from individuals, municipalities and state governments.

The Philadelphia School, as an example, was founded by subscriptions amounting to \$25,000. It now receives \$17,500 annually from the State and \$10,000 annually from the city. Most of the machinery has been donated by interested manufacturers. Fees are charged for instruction, \$25 for a single course in general analysis and technical chemistry and \$15 for each other branch. Over 1,200 students graduate from the school each year.

In the United States the correspondence school has been developed to such an extent that courses of study in practically every industry are prescribed. These courses good as they may be, can never take the place of an established college with its practical illustration and actual work. Many Canadians are now taking these different courses. The gentlemen in Montreal interested in the proposed Technical Institute estimated that in 1904 the people of Montreal sent \$100,000 to such schools in the United States.

Your committee in this very brief account of conditions as they exist abroad only hope to emphasize the value that these old manufacturing and commercial countries put on this practical education. Its development has been wonderful; its importance most marked and appreciated. It will be more extensively and more scientifically conducted each year hereafter.

The conclusion of your committee is that the country that develops most extensively but also most carefully and scientifically its opportunities for technical training will be able to lead the other countries of the world with the products of its industries.

It is the duty of each citizen and of each municipality in Canada and of the Provincial and Dominion Governments to see to it that the cause of Technical Education is assisted by every means possible and whenever opportunity presents itself, and in order to bring this serious question to the attention of the Dominion Government your committee begs to recommend the following resolution:—

"That whereas the governments of the important manufacturing and commercial nations of the world have extensively developed their various systems of Technical Education and have thereby done much to gain the manufacturing supremacy they now possess;

"And whereas no serious effort has been made in Canada to develop a system of Technical Education and the Trade and Commerce Department of the Dominion Government has not recognized it as one of the spheres of its activity;

"Therefore, be it resolved, that the Dominion Government be requested to appoint a commission to report on the best method for establishing a comprehensive national system of Technical Education to provide Canadian industry and commerce with trained assistants from amongst the Canadian people and thereby aid in developing Canadian industry, and do away with the present condition of affairs, which compels employers to go abroad for men to occupy the more responsible and more remunerative positions in Canadian enterprises."

S. M. WICKETT,
Chairman.

R. J. YOUNGE,
Secretary.

THE PRESIDENT:—The Chairman of the committee has now arrived and I will ask him to move the adoption of the report and give any information that may be required.

MR. S. M. WICKETT:—I have great pleasure in moving the adoption of the report. I may say, it does seem surprising, that in a young country like Canada the system of education has been such that it has been rather a training for the professions than for industry. We have to-day in the United States in the various professions almost as many Canadians as we have in the same professions in Canada. It seems to me and to the committee that the education of this country should fit the people of this country to do the work required here in Canada. A few years ago the labor unions were opposed to technical education. They thought it was likely to do away with apprenticeships, and so on. That is no longer the case. Trade unions all now agree in supporting technical education. So that the manufacturers in asking for a commission to take up this very, very important matter, are voicing the sentiments of organized labor as well as the best opinion in their own body. I have great pleasure in moving the adoption of the report.

MR. PIGGOTT:—I have much pleasure in seconding the motion. I would state as my friend the Chairman has stated, the educational development to-day leans very strongly to the professional. As we are well aware, the legal and the medical professions are over-crowded. Good mechanics and engineers are at a premium. It was my privilege, not long ago, to visit a high school in Duluth, erected some ten years ago at a cost of about \$40,000, where they teach the mechanical arts. The foundation which such a school lays is very valuable. It teaches the technical crafts as well as the mechanical, and it is a great aid to any country. I very much regret the fact that we are seriously behind in that branch of learning, and I hope at the earliest date we will have a change of conditions.



GOVERNOR'S GARDENS AND THE WOLFE-MONTCALM MONUMENT.

Quebec's Claims to Recognition.

HON. MR. ROLLAND:—I am quite in favor of the report which has been read. But there is one point which I wish to mention. You speak of Toronto having established a Municipal Technical School. I would like to add to this report, that the Government of Quebec has for years maintained Technical Schools in Montreal. There are schools at Point St. Charles where they are taught mechanical drawing, from which the employees of the Grand Trunk derive great benefit. There are also schools at Three Rivers, Sorel and Valleyfield. In those schools there is one branch for plumbers, which is doing very practical work; there is also a Boot and Shoe Department, also a Lithographing Department. I think, therefore, that mention should be made in the report of the technical schools in the Province of Quebec. (Applause).

MR. BURTON:—I would like to suggest another addition. It mentions here in the report three countries, Germany, England and the United States. I think it is a great mistake to omit both France and Switzerland. Switzerland has had practical education for over seventy years. With regard to France, the technical schools of that country are very well known, especially some of the textile schools, and as we want this report to go forth as the report of the Association, I think it would be better that these omissions should be added on the first page.

MR. WICKETT:—I think some wording may be inserted to meet the suggestions thrown out. As regards Quebec's Mechanical Drawing Schools, there are other schools in Canada, such as the Ontario School of Art and Design and the like, to which the committee has not made reference. The committee has not overlooked the very efficient work of the Quebec schools; but they have been working along very special lines and they can be called schools only in a very limited sense. However, I think the committee can add the points suggested.

As regards France and Switzerland, certainly the schools of those countries have done very effective technical work; but the three countries, Germany, Great Britain and the United

States are particularly in mind because they are Canada's keenest competitors in the lines of industry which we are seeking most to develop. I would suggest, Mr. Chairman, that it be left in the hands of the Secretary and the Chairman of the Committee to insert certain changes.

Agricultural Education.

MR. HENDERSON:—I think exception might be taken to the last clause. There is probably no other country in the world that has set the same standard of technical education as regards agriculture as Canada has. I think there ought to be a clause saying "Apart from agriculture," because the education that is given in the agricultural schools is purely technical. While the report does not particularly refer to it, I think it would be a mistake not to acknowledge the work done. I think everyone will admit that the training that is given in the school at Ottawa, especially under the direction of Professor Robertson, is superior to any similar education given in any other country in the world. Canada has sent men to Australasia and all over the world, and certainly it is acknowledged that the training they have received there must have been of a very high order indeed.

MR. ROWLEY:—I think, Mr. President, that considering her youth, Canada stands higher than any other country in the world in the matter of education. I think perhaps we are over-educated. I think she will compare very favorably indeed with Switzerland or Germany or the United States or Great Britain considering her extreme youth, and instead of deprecating I think we ought to be proud of what we have done.

HON. MR. ROLLAND:—How would it do to add these words, "in the Provinces of Quebec and Ontario the Governments have made provision for Technical Education. We desire to express approval of their action in this matter."

Practical Encouragement.

MR. WILDMAN:—To connect this matter on Technical Education with the Association, I would like to throw out a suggestion (and I will put it in the form of a resolution if it is thought best), that in view of the large sums of money that are sent out of the country through these Correspondence Schools, which are purely technical in their appeal to the ambitious, that we get a series of text books on technical subjects at the head office of the Association and at the branch offices. These books on various trades and subjects would be for the reference of the members of the Association, and a list of them as purchased might be published in *INDUSTRIAL CANADA*, and correspondence be invited from people who knew their trades.

I am trying to get something practical without going too far. Going to the Dominion Government is a good way, but it will take a number of years to get down to the common everyday artisan. Now we want something which will bring something practical, because there are many young fellows who will be dead before some of these things might be brought into effect. That would be something that would be within our reach. It would not detract from the resolution embodied in the report, yet it would bring technical education within reach of many a young artisan who is anxious and willing to prosecute studies for which we ourselves have no time. We could refer them to these books, and we would be able, by means of correspondence, to bring forth what many men have taken perhaps a life time to perfect.

MR. MCGIBBON:—Since a suggestion has been made to do something practical, I would like to make this suggestion, that the Association have a special Representative Committee from the whole of the Association to preach or to circulate information regarding technical education; and that the Association give a special grant of a certain sum of money, either from the general funds of the Association or by special subscription from the manufacturers, who are all deeply interested in this question, to bring this subject more forcibly before the public. I think it

is a thing that demands serious and immediate attention from this Association.

MR. C. R. McCULLOCH, (Hamilton):—As one who has been somewhat interested in education in former years, I would like to throw out a suggestion that the committee may perhaps consider, and that is this, that not only in the larger cities should this matter be taken into consideration, but in the smaller towns and other places where large manufacturing institutions are located.

Now it must be admitted, Sir, that our large manufacturing concerns employ the most skilled chemists and the most skilled machinists that are to be found in any department of the industrial effort in Canada. The best lectures, to my knowledge, that have been delivered have been lectures from skilled workmen, heads of departments and others, and I would recommend that the gentlemen here representing the great industrial institutions of Canada see to it that this winter duly qualified men in the various departments of their businesses are arranged with to give a series of practical talks, so that the young artisans connected with the institutions in that particular centre may convene together on certain evenings during the winter, and listen to good substantial stuff, not from text books, but from men alone. And if some steps were taken by this Association to encourage such a course of lectures throughout the Dominion, by making a grant, it would not be very long before technical education would be a live question, much more live than we can make it by discussing it academically here.

I would suggest to the committee that this matter receive their most careful consideration, and that these lectures be put on during the coming winter. I make this suggestion as one deeply interested in the education of the youth of Canada. It seems to me, Sir, that the Canadian youth should have afforded to him the opportunities that were afforded to our great competitors in other parts of the world; and let us begin humbly, if you will, not with great institutions where immense sums of money are spent to experiment with, but in an unpretentious way, quite in keeping with our past history, and develop from a small beginning what I trust, Sir, will achieve great things.

MR. DRUMMOND:—I think Mr. Cullough's suggestion is a most excellent one. Mr. Theodore Search, of Philadelphia, the President of the Philadelphia Textile School, that has to-day an attendance of 1,200 and sends out annually a large number of the best qualified students as to technical education in the United States, told me himself that in 1883 he started in a private room down in the lower part of Philadelphia, in the poor district with eight pupils. He was a well-to-do man at the head of a large business, but he gave up each evening in the week throughout the whole of the winter to enthuse the young sons of the artisans of Philadelphia on this question of technical education. He did that personally. The result was that his good, practical work attracted the attention of the best manufacturers of Philadelphia and the most philanthropic people; and they had a ladies' committee as well as a gentlemen's committee, and the result was the establishing of schools whose fame to-day is world-wide.

The other day at Montreal, speaking as one who had taken some little interest in the Montreal Branch, and in trying to enthuse the people of Montreal in establishing a technical institution worthy of that great city, I said, after two years of work being carried on by some of our best men, I had come to the conclusion that the people of Montreal weren't yet awake to the great importance of this question of technical education, an importance which I can better illustrate by reading the concluding clause of the committee's report,—"the conclusion of your committee is that the country that develops most extensively, but also most carefully and scientifically its opportunities for technical training, will be able to lead the other countries of the world with the products of its industries."

I said the other day I was disheartened with the apathy of the best and wealthiest men of the City of Montreal on this

great question; I began to feel we ought to take a leaf out of the book of that most practical nation, Japan, and if we could not do anything, to ask our Government and manufacturers to join hands in some practical scheme to send some of the best of our young artisans abroad to the best schools that the world could give us, to spend a year, or two, or three if necessary, at our and the country's expense, so long as we could be sure of bringing them back here to Canada to teach other young Canadians something of the advanced technical ideas of other countries that are going ahead of us on this point.

As Mr. Rowley has said, we ought to be proud of what we have done. We are proud, but we are not doing enough. Canada must stand alongside of the greatest producing countries in the world, and we are going to do it. We have got to wake up quickly—quicker than any of these people ever woke up in the past. The ideas that have been thrown out here to-day in regard to what we might do in the meantime should be followed, and I think we have a good deal to thank our committee for in the work they have done.

I think we ought to pass that report, but I would like to say a word or two giving Quebec credit. Mr. Rolland says the reason she has not done more is that she has not got the money. It is a pity only a few dollars can be spent in Quebec teaching the children of our people. It is a pity the great Province of Ontario has not done more. It is a pity the great city of Montreal has failed in carrying out what we have been desiring. I believe she will yet do it. But in the meantime this question is great enough for the Dominion Government to tackle; and your committee has given us a report that is worthy of the support of every member of this Association. (Applause).

THE PRESIDENT:—Gentlemen, if there is no further discussion we will put the motion to receive and adopt the report, amended as suggested by the Hon. Mr. Rolland and Mr. Burton.

MR. HENDERSON:—I would suggest that these words be added "apart from agriculture where the education given is of the highest order."

MR. ROGERS:—With respect to the second clause in the resolution, I understand the British North America Act provides that education is a matter for the provinces. Does not this clause look a little like criticism of the Provincial Governments, as though they had not done their duty in this respect? Would not our resolution be stronger by omitting that clause, or inserting something to take its place of a different character?

Sir William Macdonald and Professor Robertson.

MR. FISHER:—It seems to me there is one omission in this report and that is because no reference has been made to the excellent work of Sir William Macdonald. I do not know what he has done in the Provinces of Quebec and Ontario, but for the last two or three years he has started a most excellent work in the Maritime Provinces. Perhaps you are fairly familiar with that, and I do not care to take up the time here, but it seems to me that he, with Professor Robertson, is doing a work that is entirely in line with the suggestions expressed in this very excellent report. He has laid the foundation stone. Technical education is higher, the upper part of the structure; he is laying the foundation in connection with his manual training and domestic science for young women and nature study schools.

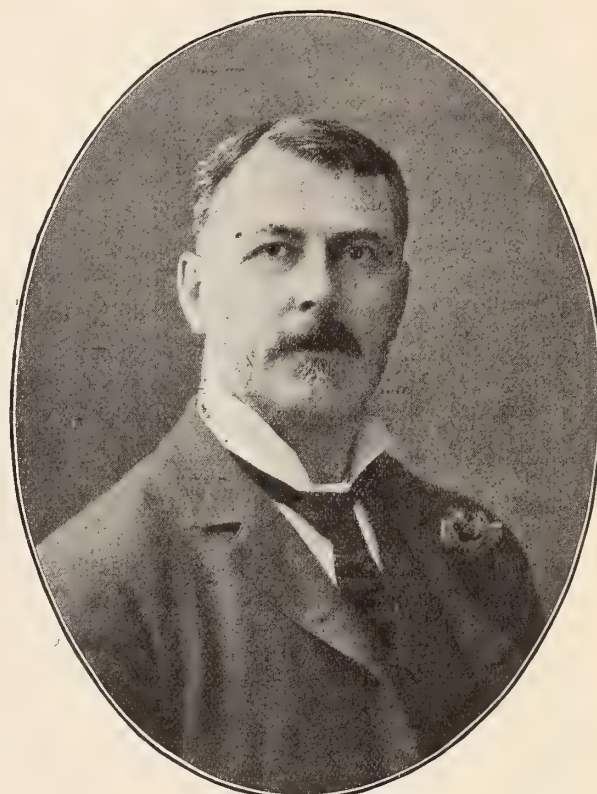
It seems to me in some way there ought to be a recognition of the work that Sir William is doing and of the work that is being carried on by that most eminent Canadian, Professor Robertson, who to my mind, is a man who deserves the very greatest praise at the hands of every true Canadian.

MR. DREWRY:—Mr. Chairman, I must say I was very much surprised to hear the City of Montreal singled out and criticized for inactivity in this matter, because I may say we in the West have always considered, or considered for some years, at all events, that Montreal was entitled to a very great deal of credit through the gentleman whose name has just been mentioned, Sir

William Macdonald. We have a Macdonald Manual Training School, a very active organization, and I believe it has been of very great benefit indeed to the young people who take advantage of it.

I was also surprised in reading through this report to find no mention of that gentleman's work, so that I am fully in accord with the sentiments of the last speaker, and I think some reference should at all events be made to encourage similar work on the part of those who are able to do good for their country.

MR. DRUMMOND:—I might say in reply to that, no one has a higher opinion of Sir William Macdonald and of his magnificent work than I have. But I do think it wrong that the City of Montreal should rest all the burden on one man. I think throughout the whole of Canada in our large centres we ought to awaken to the necessity of supporting by our contributions and by our earnest, active work, this department of technical education. Sir William Macdonald will live in the history of this country as one of its greatest benefactors, but for heaven's sake let us follow his example.



MR. W. K. McNAUGHT.

(The American Watch Case Co., Ltd.),

Chairman Tariff Committee, 1900-06.

MR. WICKETT:—To conclude the discussion I might say the committee should, I think, take cognizance of all the suggestions that have been thrown out. Many of them have been most admirable. As regards mention of Sir William Macdonald's work, and of the University of McGill, and of the Handicraft Schools he has been establishing, I may say that all Canadian Universities have been doing a great deal of work of late years. The Committee has not thought well to refer to all the technical instruction that has been carried on, but rather to refer to the work in general terms. It might be well to include some reference to those Macdonald Schools and I would suggest that that would be done.

As regards Mr. Rogers' question as to the duty of the Dominion Government to take up technical education in preference to the provinces, the committee really has taken that up very carefully. The British North America Act says all education with

the exception of agriculture, shall be left to the provinces. The precedent is established in agricultural work. The committee is of opinion that this warrants the Association in asking the Dominion Government to take up on behalf of the country at large, the whole question of technical education. So many authorities in the various provinces and the various cities need to be brought together that it was thought the Dominion Government should be the instrument. Then again, we have the Trade and Commerce Department establishing at the present moment a National Museum. What provision is being made there for an exhibition for our various natural resources? What provision is being made there for instruction as regards these natural resources and the like? The committee has taken that point up very carefully and they have come to the conclusion as given in the report.

MR. ROGERS:—I do not wish to be understood as objecting at all to the committee's drafting a resolution addressed to the Dominion Government. Only I thought the second paragraph might be considered as a criticism of the Provincial Governments in not earlier attending to that duty.

The President put the motion to adopt the report which, on a vote having been taken, was declared carried.

THE PRESIDENT:—The next item we will take up is the report of the Tariff Committee, but I am going to call upon the Secretary to read some communications and make some announcements before we take up the discussion of that report.

The Secretary read a letter from Mr. J. O. Thorn, to the Vice-President, embodying his regrets at being prevented from attending. He also made several announcements with regard to the banquet, the afternoon's entertainment, and the ballots.

Mr. W. B. Tindall and Mr. H. W. Fleury were called upon by the President to act as scrutineers.

THE PRESIDENT:—I will call upon Mr. McNaught, the Chairman of the Tariff Committee, to read his report. (Applause.)

REPORT OF THE TARIFF COMMITTEE.

Your Tariff Committee begs to submit the following report:—

The most important event of the year for the manufacturing industries of Canada is the appointment of the Tariff Commission, which is now commencing its investigations. To the work of this commission the Association has looked forward for three years, and we believe that we may anticipate a revision which will produce a favorable effect in the development of our industries.

If the Canadian tariff is revised from a national standpoint primarily for Canadian interests, and with a view to diverting surplus trade to British sources, we believe that it will successfully meet the requirements of the country and prove of inestimable advantage to all our producing classes alike.

The Anti-Dumping regulations enforced by the Canadian customs for more than a year, have undoubtedly proved a factor in restraining foreign firms from slaughtering their goods in the Canadian market. Whatever changes may be made in the tariff looking to the encouragement of existing industries, and the initiation of new industries, it is desirable that the Canadian market should be protected against the importation of foreign goods at values notably less than those prevailing in the producing country, and provision should be made for the more effective administration of the existing regulations.

We desire particularly to recommend that special facilities should be provided by the Department of Customs for the detection of foreign made goods which are being forwarded to Canada through Great Britain, and are illegitimately receiving the benefit of the British preference.

It is to be regretted that more tariff changes were not included in the last budget speech of the Minister of Finance, so as to afford an immediate measure of relief to those industries

which are being seriously crippled under present conditions. In behalf of these we can only urge that the revised tariff be put into operation at as early a date as possible.

The growth of national sentiment in Canada must be viewed with gratification. On all sides is evidenced the growing desire of the Canadian people to protect the productive interests established within our borders, to encourage the growth of our population and the investment of capital in Canada.

Your committee is desirous that every reasonable effort shall be made by the members and sections of the Association to assist the Tariff Commission in its work, particularly in supplying the fullest information, and in reconciling conflicting interests.

In conclusion, your committee desires (1) to re-affirm the tariff resolution passed at the Annual Meeting of the Association at Halifax in 1902, as follows:

Resolved, That in the opinion of this Association the changed conditions which now obtain in Canada demand the immediate and thorough revision of the tariff upon lines which will more effectually transfer to the workshops of our Dominion the manufacture of many of the goods which we now import from other countries.

That, in any such revision the interests of all sections of the community, whether of agriculture, mining, fishing or manufacturing, should be fully considered, with a view not only to the preservation, but to the further development of all these great natural industries.

That, while such a tariff should primarily be framed for Canadian interests, it should nevertheless give a substantial preference to the Mother Country, and also to any other part of the British Empire with which reciprocal preferential trade can be arranged, recognizing always that under any conditions the minimum tariff must afford adequate protection to all Canadian producers.

(2) to reaffirm our disapproval of the bounty system as a substitute for the policy of protection.

(3) to reaffirm our opposition to any arrangement for reciprocal trade with the United States affecting the manufacturing industries of Canada for the reason that the business of Canada should not be made in any degree dependent on the changing conditions of the business policy of the United States.

Respectfully submitted,

W. K. McNAUGHT,
Chairman.

R. J. YOUNGE,
Secretary.

The report of the Tariff Committee having been received in private session, the discussions which followed are not published with the other Convention proceedings. It has been thought advisable, however, that for the benefit of those members who were unable to be present a general outline should be given of the principal points covered in that discussion, in order that the feeling of the meeting might be distinctly understood.

Perhaps the most important point arising out of the report was the appointment of the Tariff Commission. The Association had been agitating for a commission for the past three years, and while the one which the Government had appointed was not, perhaps, just what could have been desired, still its appointment was, nevertheless, a great concession to the views of the Association, and an important event for the welfare of the whole Dominion. It was believed that the Government was prompted by an earnest and sincere desire to provide a better and a higher tariff for the protection of Canadian industries.

In facilitating the work of the commission, it was strongly urged that the Association should endeavor to assist them in every way in its power. When placing any matter before the Government, the Association had always claimed to represent the concrete views of its members. To arrive at those concrete views it was necessary that the various sections of the Association should first get together and thresh out all the points connected with their respective businesses one by one. These re-

ports, when thoroughly threshed out and approved of by the Tariff Committee, should be presented by representatives from each section and, if possible, at one place only.

This plan would result in harmonizing differences as far as possible, and in saving the time of the Commission.

Nothing could be gained by asking too much. The feeling of the meeting was unanimous in the belief that the worst enemies the Association had, the worst enemies the policy of protection had, were those manufacturers whose requests were extreme, and those who took advantage of the protection accorded them to charge extravagant prices. The Association's boast was, that with a good protective policy competition within the country would, in time, bring prices down to the level of, or even below, foreign prices.

Upon motion by Mr. McNaught, seconded by Mr. Hobson, the report was adopted.

THE PRESIDENT:—The next item of business is taking up the changes in the Constitution and By-laws of the Association. I will ask the Secretary to read the proposed amendments and to explain their import.

AMENDMENTS TO THE CONSTITUTION.

MR. YOUNGE:—Mr. President and Gentlemen. In accordance with the Constitution of this Association notice of the following changes in the By-laws has been received. First, in regard to membership:

Membership.—That the clause relating to active members shall read as follows:—

"Active membership in the Association shall be open to individuals, firms, and corporations actively engaged as manufacturers in the Dominion of Canada; and when such individuals, firms, and corporations are not engaged exclusively in manufacturing, it shall be the duty of the Reception and Membership Committee of the Association to decide and report to the Executive Council whether the manufacturing interests represented in each case are proportionately large enough to warrant the acceptance of the application.

"Members may have more than one representative provided that the individual representatives named in each instance are actively engaged with and give the greater portion of their time to manufacturing industries.

"Candidates for active membership shall sign an application. This application shall be forwarded to the Secretary, and shall be acted upon by the Executive Council after report by the Reception and Membership Committee."

I may say that the recommendation contained herein was passed from the Executive Council to this annual meeting. Mr. James P. Murray has submitted another amendment which is in your hands, and which I shall also read with your pleasure.

"Active membership in the Association shall be open to any corporation, firm or individual conducting a manufacturing plant, i.e., one that produces, in replica, from materials, a product upon which labor (hand or machine) has added to its value.

"Producers of special heavy or scientific or valuable articles (not including custom clothiers, milliners or dressmakers) are also eligible for membership.

"Representatives in the Association of these firms must be directly and primarily connected with the office or works.

"Associate membership may be had in the Association by individuals interested in any firm or corporation, and who are not primarily connected with the office or works of the factory, but who are known as Lawyers, Bankers, Insurance Men, Brokers, Wholesale or Retail Merchants, etc., etc.

"Associate members are not entitled to hold office and may not vote, nor hold a certificate of membership, but may have all other privileges of the Association.

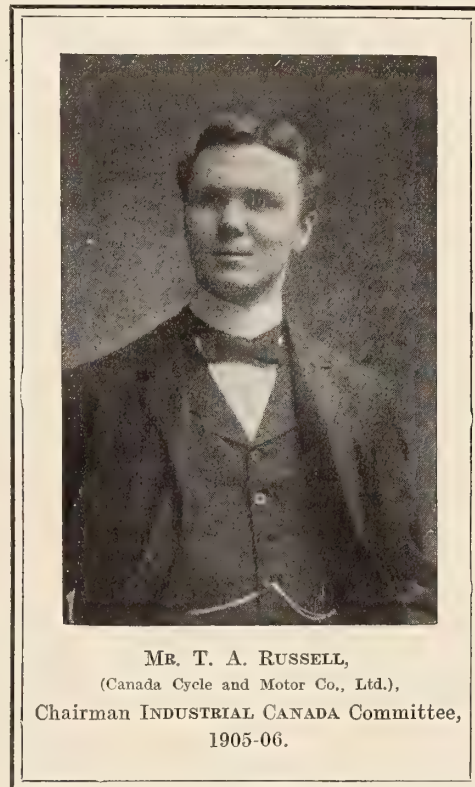
"Associate membership fee shall be \$10 annually."

MR. RUSSELL:—I have very great pleasure in moving the adoption of the amendment as proposed, the one read first by the Secretary, the one which has been considered by the Reception and

Membership Committee and approved of by the Executive Council. Mr. Murray's resolution is probably a very thoughtful one. It endeavors, however, to deal specifically; to take from the Reception and Membership Committee practically the discretion of judging in particularly difficult cases. While that may be well worded, it is difficult to describe in detail all the circumstances which may attach themselves to the question of membership. Mr. Murray excepts some industries. Perhaps later on it may be found others should be excepted. I, therefore, prefer to accept the first amendment.

MR. COCKSHUTT:—I have very much pleasure in seconding Mr. Russell's motion that the original amendment be adopted.

MR. MURRAY:—Mr. President, since the re-organization of this Association we have really never had a proper definition of what a manufacturer is. I have seen, as many of us have seen sometimes, a considerable amount of unpleasantness when some name has been proposed for membership and been opposed by some of our own members. There have also been many occasions when names have been proposed and accepted for membership whose primary interests have not been manufacturing interests, and their subsequent action upon matters connected with the Asso-



MR. T. A. RUSSELL,
(Canada Cycle and Motor Co., Ltd.),
Chairman INDUSTRIAL CANADA Committee,
1905-06.

ciation has been strongly in favor of their primary business, whatever that business might be.

I don't intend to speak very long in connection with this matter, nor did I bring it up with any intention of directly opposing the resolution that was handed in by the Reception and Membership Committee; but rather to get, if possible, a broad expression of opinion from the convention that might serve as a guidance of future membership committees in choosing members of this Association. The membership committee of to-day may not be the membership committee of two or three years hence, and the discussion that is before us to-day may be unknown to them, or probably forgotten, and the same question may arise then as now as to the proper qualification of a member.

We also know on some occasions it is a very difficult thing to get a full meeting of the Reception and Membership Committee. That difficulty has been overcome to some extent by having the various Branches pass upon the applications arising from their own territory; but there are a very great many different towns and cities who have no branches, and before whom the member-

ship does not come at all except through the Membership Committee; and if that meeting of the Membership Committee happens to be a small one there is possibly a bit of wire-pulling, as I think there may have been on one or two occasions, to get some applicant in, and it may occur again. I am more anxious to see a proper definition of what qualifies an applicant as a member of this Association and to see it put in some kind of shape where it will guide any committee for the future.

The other parts of my recommendation speak for themselves. As there may be a number of gentlemen connected with manufacturing industries, but only in an associate way, and as it might be advisable to introduce them into our Association, a fourth qualification might be added, covering associate membership, and an associate member being a man that is associated with manufacturing but not primarily or directly connected with manufacturing interests.

It is with these views I desire to bring this matter before the convention, and to leave it in your hands, and I am quite satisfied if the plan gets a fair discussion. I beg leave to move the amendment to the amendment.

MR. DRUMMOND:—I cannot understand why Mr. Murray leaves out costumers, clothiers, milliners and dressmakers.

MR. MURRAY:—Because they do not manufacture in replica.

MR. DRUMMOND:—The weakness in this amendment to the amendment seems to lie in the question of associate membership. You say that they are not entitled to hold office, and may not vote but all other privileges they have. We can all conceive that on one of those very important excursions we are making for national purposes that that train might be crowded with just such men as are covered in this associate membership and they would speak publicly. The public would not know the difference between an associate member and a member that would be speaking for this great organization. I think the original amendment is very much safer and that members may have more than one representative, but each of those representatives must give a proportion of his time to manufacturing interests. I would rather have five hundred men in this Association than ten thousand if they were the wrong kind, representing interests that we are representing. For that reason, while it is a difficult matter, and I know Mr. Murray has taken up this thing in a very excellent spirit to try to find out what we ought to do, yet it has always been a dangerous question, this trying to know whether we should admit a member or not; but I think lately we have had the worst features of this on those excursions of ours, having men that should not have been there at all. For that reason I think the original amendment moved by Mr. Russell and seconded by Mr. Cockshutt, ought to have our support.

MR. MCGIBBON:—Will this amendment be retroactive?

THE PRESIDENT:—No, it is not the intention, I believe, to make it retroactive.

The amendment to the amendment has not yet been seconded.

MR. McCULLOUGH:—To get the sense of the meeting, I second the amendment to the amendment.

The President put the amendment to the amendment as proposed by Mr. Murray and seconded by Mr. McCullough, and on a vote having been taken it was declared lost.

The President stated the amendment to the Constitution as proposed by Mr. Russell.

MR. MCGIBBON:—Will that be retroactive?

THE PRESIDENT:—I think not. I don't think any great harm has been done to the Association in the past. It was to guard against any extreme danger or extreme use of the doorway which was opened in the past that this change in the Constitution was suggested; but it would be quite within the rights of the meeting to decide whether or not this should be retroactive.

MR. BOOTH:—I think the resolution speaks for itself.

MR. McNAUGHT:—I draw your attention to the word "members" in the second clause. I think it should be changed to read "firms or companies."

MR. YOUNGE:—That second clause has reference to all members after the first. A firm which holds a membership may have more than one representative. So that clause is intended to deal only with any member after the first. We have a few companies which are represented in their first memberships by members who do not give their whole time to manufacturing industries. It may be that the president of a company is nominated as a representative, and he may not be actively identified and give the whole of his time. The second member must have the whole of his time given to the industry.

MR. McNAUGHT:—I understand what the Secretary states, but I want to draw your attention, Mr. President, to the fact that the word "members" is not very clear; I think it would be better if it read "firms or companies." I think it would be more distinct.

MR. ROWLEY:—The question which Mr. McGibbon asked has not yet been answered. It does not seem to me it is possible for this Association to turn any member out now who has been elected. I think that ought to be definitely understood. I know there was a time when we were mighty glad to get members in and I think we ought to keep them in.

MR. DRUMMOND:—No sir, no sir.

MR. PIGGOTT:—I think this clause should be retroactive. I know of associate members to-day that were never engaged in manufacturing; all they ever did was to make their case for a client. If we continue to receive members of that class I think it will detract very materially from the Manufacturers' Association. I don't think it is advisable to accept applicants, unless they are engaged in actual manufacturing.

(Voices: Question, question.)

THE PRESIDENT:—There is no motion before the chair as to whether you want this made retroactive or not.

MR. MCGIBBON:—I move that a clause be inserted in this amendment, distinctly stating that it will not be retroactive.

MR. BLAIN:—Mr. President, I am afraid that the members down in this part of the hall have not a very clear idea of the wording of that amendment to the original by-law. This question of active membership, Mr. President, is something that is rather a difficult matter to determine.

For example, there are many in business or interested in manufactures that do not give their time actively to it. I might take my own case for example as the chief officer of an institution where all of those that are interested in manufacturing are in the same position as myself; that is, we have no active man except a hired manager, a man who has no interest in the institution except from year to year. Under this by-law it seems to me, although we had a very large interest, some \$600,000, invested in it, there would not be any means of having representation here at all if I am correct in the interpretation of those words "active membership."

THE PRESIDENT:—Mr. Blain, I think your idea is wrong. When the committee drafted this by-law the very idea they had in mind was to provide for just such contingencies. The active membership, which is really the whole membership of the Association with the exception of life membership and possibly honorary membership, is open to individuals, firms or corporations. That would cover your case. The company to which you refer would be eligible for membership and entitled to a second representation by one of its officers or any one they think fit to represent them in the Association. But the danger is as illustrated in the last excursion; there is an incentive to many to become members to take advantage of such outings. And while no harm has been done, and while I think perhaps some good work has

been done, one and all have come back to Canada fully agreeing with our position. However, we do not want to have the doorway left open to anything which might be dangerous in the future, and I think that the first clause will cover such cases as this.

The second clause was drafted to meet men coming in as second members. Certain firms said, "Mr. Jones or Mr. Smith is a shareholder in our company, we nominate him as second member in our company." Mr. Jones or Mr. Smith might have been a lawyer or a banker or some person with no direct interest in manufacturing. It is for the purpose of avoiding that that this change was suggested.

MR. DREWBY:—How would it do to add the words after the second clause: "Nothing in the foregoing shall affect those at present members of this Association." That would make it clear.

MR. MCGIBBON:—I am quite satisfied with the explanation the Secretary gave, and think that we might pass this by-law as it stands to-day, and have a resolution afterwards affirming it as not retroactive.

THE PRESIDENT:—With that understanding I think possibly you are ready for the question. It has been moved by Mr. McNaught and seconded by Mr. Booth that the word "members" shall be changed to "firms or corporations."

THE SECRETARY:—If that change is made I am particularly anxious that Mr. McNaught should understand this, because I think it arises entirely from an intricate situation which is very hard to explain. If we adopt the change suggested by Mr. McNaught we will not be able to make provision for the admission of a member such as Mr. Blain, who has just spoken to us. That clause will then read, "Individuals, firms or corporations may have more than one representative provided that the individual representatives named in each instance are actively engaged with and give the greater portion of their time to manufacturing industries." That would shut out a member such as Mr. Blain.

THE PRESIDENT:—That is not the intention of that clause I think. Our idea and the idea of the committee was that the second representative must be actively engaged with and give the greater portion of his time to manufacturing industries.

MR. DRUMMOND:—There has been placed in my hands a suggestion that is worthy of discussion; it is to make that read, "Firms and corporations may have more than one representative, provided that the representatives individually named in each instance are actively engaged with and give the greater portion of their time to the manufacturing industry or industries they represent." It limits them to appoint a man from their own company.

THE PRESIDENT:—I think that clause can probably be helped out by omitting the words "in each instance." The idea was that where there was a second, third, fourth and fifth representative, that each and every one of those further representatives should be actively engaged.

MR. DRUMMOND:—You do not get the idea I was trying to put forward on behalf of another gentleman. As that clause is drafted at present any firm can appoint a second representative who may not be interested in their own particular business. Do we want that? (Voices, No.) Then it is suggested that firms and corporations may have more than one representative providing that the individual representatives named in each instance are actively engaged with and give the greater portion of their time to the manufacturing industry or industries they represent. I want to get them down to the particular business they are appointed to represent.

THE PRESIDENT:—I think that is very right, but there still may be confusion if we have included those words "in each instance," and I don't see any special necessity for them. "In each instance" then may be read to refer to the original member,

which is not intended if I read the intention of the committee aright.

MR. DRUMMOND:—Supposing we strike out "in each instance"?

THE PRESIDENT:—I think if we struck out those words and add the words suggested by yourself it will cover the difficulty.

MR. RUSSELL:—I see a difficulty in adding the words suggested by Mr. Drummond. Supposing a gentleman is interested financially, practically the proprietor of four or five industries. He is nominated as member for one industry; his interest is large and varied on account of his being a heavy stockholder in three or four industries; you would bar him out in this case unless you could prove the greater part of his time was connected with the one for which he was nominated for membership.

THE PRESIDENT:—How would this clause meet the difficulty: "Individuals, firms and corporations may have more than one representative provided that the individual representatives named after the first are actively engaged with and give the greater portion of their time to the manufacturing industry or industries they represent." If that meets with your approval and there is no further discussion, we will put the amendment as moved by Mr. Russell and seconded by Mr. Cockshutt. (Carried.)

The Secretary read clause (a) of the second amendment re Committees:

Committees.—(a) That Clause No. 1 shall be amended by adding the words "Chairmen of the Standing Committees," after the word "Treasurer."

MR. YOUNGE:—I may explain, gentlemen, that this change merely adds the Chairmen of the Standing Committees as members of the Executive Council of the Association. (Carried.)

The Secretary read Clauses (b) and (c) as follows:—

That the following new clauses shall be inserted:—

(b) "That the Insurance Committee shall consist of twenty-one active members, seven to be elected each year and to hold office for three years.

"The duty of the Insurance Committee shall be to supply expert advice and assistance in the placing of insurance, in the regulation of insurance practices, and in the protection of the members' interests in respect thereto.

"They shall, subject to the authorization of the Council, arrange for a systematic and regular inspection of the premises of members, suggest improvements in risks, and cause to be obtained the benefit thereof, in reduced insurance rates.

"They shall adjust losses by fire when called upon to do so." (Carried.)

That the following new clause be added:—

(c) "A special Committee on Finance, consisting of the President, the First Vice-President, the Provincial Vice-Presidents, the Treasurer, and three others, shall be named at the first meeting of the Executive Council held after the annual general meeting. No expense or liability shall be incurred in the name of the Association without the consent of this Committee." (Carried.)

Nomination and Election of Officers and Committees.—That the following sentence be added to Clause No. 2:—

(d) "This provision shall not apply in the case of the Chairman of the Insurance Committee, who shall be elected by that committee at the first meeting held after the annual general meeting."

MR. YOUNGE:—This clause is in amendment of the present clause in the constitution which provides that officers and committees shall be elected by this annual general meeting. This clause makes an exception of the Chairman of the Insurance Committee, because the members of that committee are widespread, and it was thought it would be a wise suggestion to

leave the election of the Chairman until they could get together from the various provinces. (Carried.)

The Secretary made announcements and read communications from the Secretary of the Builders' Exchange in Montreal, addressed to the Montreal Secretary of the Association. This communication, on motion of Mr. McNaught, seconded by Mr. Roden, was referred to the Parliamentary Committee.

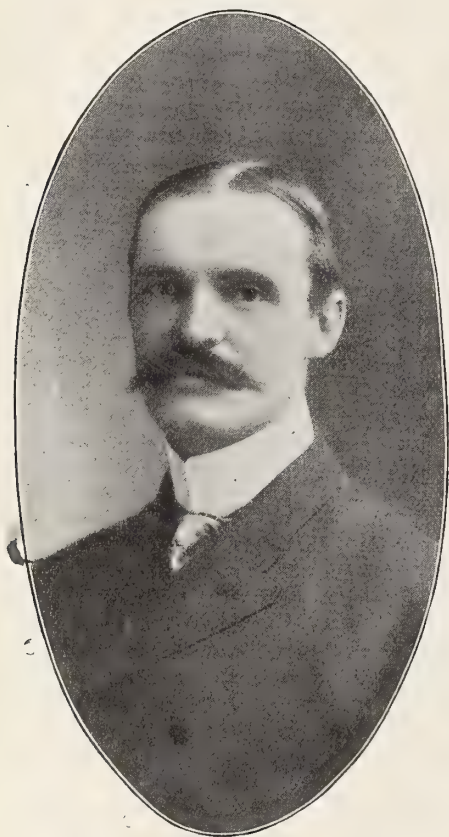
The Secretary read a communication from Mr. William J. Bulman of the Employers' Association, Winnipeg, with reference to the fight for an eight-hour day in the printing trade.

Moved by Mr. Roden, seconded by Mr. Cockshutt, that the matter be referred to the Parliamentary Committee. (Carried.)

THE PRESIDENT:—We have now finished everything we have on the agenda, but I believe Mr. Blouin has something to bring before the members at this session.

Compulsory Inspection of Hides.

MR. BLOUIN:—Mr. President and gentlemen, I think under the head of unfinished business I could bring forward a question



MR. LLOYD HARRIS,
(The Underfeed Stoker Co., Ltd.),
Ontario Vice-President.

which has been troubling those interested in the leather and hide business: I mean the question of compulsory inspection. Three years ago a bill was put before the House of Commons by Mr. McCarthy, M.P. for Simcoe. For reasons known or unknown the bill was not passed. As I cannot speak the English language very well I would ask Mr. Younge, the Secretary, to explain to the Association what part our branch has taken in connection with this bill. I think it is wise to do that so that you will be better posted on the question than I could post you.

MR. YOUNGE:—In answer to Mr. Blouin's request, I may say that the question of the inspection of hides was brought up by our Quebec members in 1904, and was taken up very seriously by our Parliamentary Committee. We recommended their suggestion at that time with reference to general inspection of hides

in the Dominion. It meant a good deal to a number of our members, in this Province particularly, and the Association was in hearty sympathy with their suggestions, because it was a progressive move and would undoubtedly benefit the whole of the tanning trade.

The action taken at that time was to accompany our Quebec members to Ottawa and support their request before the Parliamentary Committee there dealing with the matter. At that time the butchers in Montreal and Quebec raised objections, and by using a good deal of influence in the House of Commons had the measure side-tracked. I would suggest that the convention approve of the principle of the inspection of hides advocated by our Quebec members, and recommend that the assistance of the Parliamentary Committee be given to them when the matter is brought up next year. (Hear, hear.)

MR. BLOUIN:—With your permission I would add a few words. I would say that when we started that move the tanners from Ontario sent a delegate, Mr. Wickett, and he joined us and we were perfectly unanimous then. Many butchers joined us, but there were some who did not want it. Those who were then opposed to the bill are mostly with us now; so for the purpose of bringing the matter before you, I will move, seconded by my friend, Mr. Amyot, that the Government be asked to pass a law making the inspection of hides compulsory.

MR. AMYOT:—I have much pleasure in seconding that motion. The Board of Trade also passed a resolution in that direction, and I know for a fact that the butchers and hide dealers that were opposed to this compulsory inspection have since that time approved of the project.

THE PRESIDENT:—Gentlemen, I think possibly we had better refer this to the Resolution Committee, and it will come before us along with the other resolutions this afternoon. If that meets with your approval we will take that line of action. (Carried.)

MR. FORTIER:—May we know the state of health of our ex-President, Mr. Birge?

THE SECRETARY:—I was sorry to learn from Mr. Alexander, Mr. Birge's friend, that he was not feeling quite so well; they were doubtful whether he would be well enough to-day to be taken home at two o'clock this afternoon.

On motion of Mr. A. A. Brown, the sympathy of the Association was extended to Mr. Birge.

At 12.35 p.m. the meeting adjourned to re-assemble at 2 o'clock p.m.

REPORT OF THE RESOLUTIONS COMMITTEE.

At 2.30 p.m. the President again called the meeting to order and said: We will proceed with the first business of this session, which is the report of the Resolutions Committee. I will ask Mr. Younge to read this report.

Mr. Younge then read the following resolutions:—

Votes of Thanks.

Resolved, that the heartiest thanks of this Association be tendered:—

(a) To His Honor, the Lieutenant-Governor of the Province of Quebec, for his kindly courtesy and welcome at Spencerwood.

(b) To the Honorable S. N. Parent, Mayor of the city of Quebec, and the City Council, for their generous welcome to the members of this Association and their friends.

(c) To the Honorable Raymond Prefontaine, Minister of Marine and Fisheries, for placing at the disposal of the convention the boat for the harbor trip.

(d) To Mr. George Tanguay, M.P.P., who so ably conducted the arrangements for the magnificent civic reception extended to the members of the Convention on Monday evening, September 18th.

(e) To the Garrison Club of Quebec and the Quebec Y.M.C.A., for extending to visiting members the privileges of their respective clubs. To the C.P.R. and G.N.W. Telegraph Companies and the Bell Telephone Company of Canada for the courtesies extended to the members of the Convention.

(f) To the transportation companies of Canada for the special rates and trains granted for the Convention.

(g) To the officers and members of the Quebec Branch for the magnificent reception which they have prepared and the princely hospitality extended to the visiting members of the Convention. (Carried.)

British Trip.

Resolved, that the sincere thanks of the Canadian Manufacturers' Association assembled in annual convention be tendered to the Right Honorable Lord Strathcona and Mount Royal, to the officers and members of the London Chamber of Commerce, the officers and members of the Chambers of Commerce in Paris, Walsal, Birmingham, Sheffield, Leeds, Bradford, Liverpool, Newcastle-on-Tyne and Edinburgh, and to all others who so generously welcomed and entertained the members of this Association who visited the Old Country during the past summer. (Carried.)

Preferential Trade.

Resolved that this Association approve of the steps being taken by the Dominion Government towards the establishment of preferential trade relations between Canada and the other portions of the British Empire, and reaffirms its belief that the further cultivation of Imperial trade relations is one of the most important phases of commerce. (Carried.)

British West Indies and Newfoundland.

Moved by Mr. W. S. Fisher and seconded by Mr. W. K. McNaught, and resolved, that the Canadian Manufacturers' Association looks with favor upon the proposition to secure the admission of the British West India Islands and Newfoundland into the Canadian Confederation, and would respectfully ask the Federal Government to give this matter early consideration;

Further resolved, that the Secretary be instructed to forward this resolution to the members of the Federal Government and to the members of the Senate and House of Commons.

MR. FISHER:—Mr. Chairman and Gentlemen: At a meeting of the Maritime Board of Trade, which includes the principal business men of the three lower provinces, held in Yarmouth last month, some topics of importance came up for discussion, among them being the question of steel ship building, the question of a fast line which was touched upon in the President's address, the advisability of a Maritime Union, and also this question of the annexation or federation of Canada and the West Indies. The topic, sir, that I wish to refer to is that which you have already heard the resolution with regard to. I will briefly address you upon it.

I may say, in explanation, that our thought was merely a tentative one. It was not in the minds of the promoters of the proposition in the Maritime Provinces, nor is it in my mind to-day, that we should conclude that there are no obstacles in the way, and that we should go right along and cement this federation, railroad it through as it were, at once. The suggestion has been put forth for the purpose of stirring up thought and discussion. At the meeting referred to it was finally decided a committee of gentlemen who were competent to deal with the question, who know a good deal concerning the trade relations of Canada and the West Indies, who have travelled extensively over there—and that embraces quite a number of gentlemen from the city of Halifax—should be appointed to draft a resumé of the position stating such facts as they could, to submit this in turn, as minute and concise as possible, to every newspaper man throughout Canada and in the West Indies, and ask these men to comment upon them editorially, and further to ask discussion in order that all light possible might be thrown upon the

question. If it is finally decided it is a good thing that the drawbacks are not as great as the advantages, then by that time both in the West Indies and in Canada sentiments will be created up to the point where it is necessary to take action. Therefore, you will please understand it is more a tentative thing, an educative thing.

Just a word or two with reference to the question in a general way. Only to-day there is published in the Montreal Herald a statement showing the foreign trade of Canada for the year ending, I think, June 30th, and the President was good enough to give me this slip. I had some other facts regarding it, but I think they are a year old. These facts to-day are up-to-date. I will give you the figures pertaining to both Newfoundland and the West Indies.

Perhaps you may think what I have said particularly refers to the West Indies. It was to me desirable we should also include in the resolution the Island of Newfoundland. That has been before this country for some years. The Government of Canada has made advances to them. As yet nothing has been done, but I think we all feel it is very desirable that a union should take place at the earliest possible date. It would seem, however, it will be some time yet before public opinion in Newfoundland can be worked up to that point.

The same thing may apply to the West Indies, although those who are conversant with the West Indies think, I believe, that to-day is the opportune time to discuss it there, because they are looking around for increased trade. Before very long they will probably be looking a little more in that direction. It will be a matter of greater importance to them. As soon as the United States extend their trade to their tropical possessions, just so soon will they be disposed to put up a wall against British possessions. When that time comes the shoe will begin to pinch. To-day there is a very warm hearty feeling among the West India Islands in favor of the maintenance of the British connection, and the purchase of British and Canadian goods. Unfortunately the opportunities for the Islanders to purchase Canadian goods are limited from a lack of proper transportation facilities. In a general way they require our products. They require our manufactured goods, they require our lumber and fish and many things of that kind. We in turn produce none of the goods they produce. We have for them a constantly growing market for the tropical production of those islands. That seems the strongest argument that can be adduced amongst the West India people in favor of annexation or federation with us, the fact that the growing needs of this country along that line will consume gradually a greatly increased quantity of tropical goods; and the facts published emphasize that. For instance, we imported from the British West Indies this year \$6,077,000, as against \$4,815,000 in the year before. That roughly is an increase of a million and a quarter dollars, or practically 25 per cent. And that, as I say, is a strong argument to be used in the West Indies in favor of a proposition such as we are now discussing. If year by year our requirements and our purchases of West India products are increased in that ratio, then it would seem as if it would be a good move on their part to make an alliance with a country such as ours.

The sentimental feature of the case is something to deserve our attention, something to take advantage of, for the time will arrive—and in my humble opinion, sir, it will arrive before many years—when the question is bound to come up against the people there,—what will they do? It is impossible, I think, sir—I think a great many gentlemen here will agree with that belief—impossible absolutely for the British West Indies to remain in the present position they occupy as dependencies of the British Crown. Their future history is almost sure to be annexation to the United States or federation with Canada. Then what is our duty in the matter? What is right that we should do in the advance of our interests and in the maintenance and building up of that great empire we are now so proud to be members of?

Just one word in regard to our sales to the West India Islands. We sold the British West Indies \$2,404,000 worth of

goods last year, as against \$2,179,000 the year before. That growth is not as great in proportion, still it is near it, and it shows a very gratifying development, especially in view of the lack of shipping facilities and steamship communication between the two countries. Having visited the islands, I speak with some little knowledge of the matter, and I know while sentiment is strongly our way, the lack of sufficiently frequent communication works very greatly against us in actual fact. The consequence is that the United States, through her large commission houses in New York, captures a very large percentage of the trade. What percentage of Canadian trade may find its way through New York and be classified as American goods I have no knowledge of. We fail to get credit for what does.

Touching Newfoundland, Canada sold them last year goods to the value of \$3,473,000, as compared with \$2,900,000 the year before, a very gratifying increase. Our imports from there were practically the same, \$1,059,000, as against \$1,051,000.

That, gentlemen, I think is the case in brief. To sum it up, there is a large population whose wants will gradually grow and develop, who want the products of our country. Here again we are able to give to them a market, a growing, steadily growing, rapidly growing market, for their particular products. Couple that with the fact it seems fairly evident before many years something will have to be done in the British West Indies, some change in their mode of government, and then the question is, what shall that be? Can we make an alliance with them which will be mutually favorable to both countries? It seems to me that we can. (Applause.)

THE PRESIDENT put the motion, moved by Mr. Fisher and seconded by Mr. McNaught, which, on a vote having been taken, was declared carried.

Extra-Provincial Corporation Taxes.

Moved by Mr. John Piggott, seconded by Mr. E. G. Henderson,

That whereas the Extra-Provincial Corporation Taxes imposed by the Provincial Governments throughout Canada, and also the taxes imposed by certain Provinces of Canada on Canadian commercial travellers resident in other Provinces, are raising unnatural barriers between the Provinces of the Dominion, and as such are a direct restriction to trade:

Be it resolved, that this Association in Annual Convention assembled urges upon the Provincial Governments the necessity of abolishing all such legislation now upon the Provincial Statutes, and the bringing about, as far as possible, of co-operation between the Governments and business men of the various Provinces which will result in the freest trade intercourse and the building up of national, rather than Provincial commerce;

And further be it resolved, that copies of this resolution be forwarded to the members of the Dominion Cabinet and to the Premiers of the various Provinces. (Carried.)

Eastern Trade.

That whereas the increased interest now being manifested in the countries of the Far East, notably China and Japan, is already resulting in closer trade relations and increased business between these countries and other nations;

Therefore be it resolved, that Canada should take advantage of her proximity to the markets named, and the steamship connection now existing, by taking early steps to establish mutually advantageous trade relations with both Japan and China. (Carried.)

Express Companies.

Moved by Mr. A. W. Fraser seconded by Mr. Thos. Kenneth, and resolved, that the Dominion Government be again urged to adopt legislation which will bring the express companies operating in Canada under the jurisdiction of the Board of Railway Commissioners for Canada. (Carried.)

Inspection of Hides.

Resolved, that the Canadian Manufacturers' Association hereby express their approval of the request of the large majority of the tanners of the Dominion in asking the Dominion Government to pass a law making the inspection of hides compulsory. (Carried.)

Thanks to Press.

A special resolution of thanks to the press of the Dominion, and particularly of the city of Quebec, for the excellent reports of the proceedings of the Convention, was passed amid applause.

THE PRESIDENT:—I am going to call upon the Secretary to announce the result of the elections as far as they are at present known. We have everything in hand with the exception of the results of the election for the Ontario representatives. As soon as that count is finished we will make it known prior to the close of this meeting.

THE SECRETARY announced the officers for the year 1905-6 as follows: For President, Mr. C. C. Ballantyne, of the Sherwin-Williams Company, Montreal.

(Loud applause and three cheers and a tiger were given for Mr. Ballantyne.)

MR. BALLANTYNE:—Gentlemen, I thank you most heartily indeed for unanimously electing me to the high and honored office of President of this great National Association. I assume these duties fully recognizing all the responsibility that goes with the position that you have in your good pleasure called me to. I would feel, gentlemen, quite unequal to the task were it not for the fact that I know I will receive the unanimous support, not only of the officials connected with our Association and the general Executive Council, but of all our members. Having these assurances, gentlemen, I hope that at the end of my term I may be able to merit as much of your approval as you have seen fit to bestow upon my late predecessor in office, Mr. W. K. George. (Applause.)

This Association in the past has been very highly favored by having the most capable men engaged in industrial life throughout Canada presiding over it. The position that our Association holds to-day, not only in the Dominion of Canada, but throughout the Empire, is a very high and exalted one, and I hope, gentlemen, with your co-operation and assistance to be able not only to maintain that high position, but if at all possible to raise it a little higher. (Applause.)

I will also, gentlemen, with your kind assistance maintain the policy of this Association as outlined, and according to your meeting which is just about to close; I will also, with your assistance, maintain to the fullest extent the closer bonds between Canada and the Motherland (Applause); and I can only express the hope which you have heard expressed here so often, that the balance of trade which we are now importing into Canada from foreign countries will be turned towards the Mother Land.

Gentlemen, our membership, as you know, is 1,839. It is a very large and creditable membership, indeed, and I congratulate you all in helping us to obtain such a membership as that. We have done very well indeed during the past year to secure 328 new members. But gentlemen, I have ambitions for the year we have just entered upon—and I hope that they are not too high—and from the very hearty manner in which you have just shown your good feeling and co-operation, I feel we will be able to get a great many more members in the year 1906. The number that I have in view for 1906 is 1,000. (Applause.) That may seem large, but I feel we are all equal to the task.

We also want more finances, and that is one way of getting them. I have an idea, gentlemen, which I later on will take up with the General Secretary and those connected with our head office in Toronto, and it is this: I would like to see one of the most competent men in our Toronto office prepare a list of all the possible manufacturers throughout Canada who are not now members of this Association, and tabulate all these names on an index system, and promote that system throughout the year. I

believe if that were done—and I know it will be done well if our Association takes it up—and a nice letter sent setting forth the advantages of our Association, and that letter signed, sealed and stamped and sent to read as a personal letter, to be followed up, we will say, for six consecutive weeks, according as may be outlined in the best way, if we do this in conjunction with the travelling representative of this Association, whom I am in hopes we will yet be able to obtain, I think that together with the assistance we can get from the various Branches we will be able to get our 1,000 members.

Now, gentlemen, I have nothing more to say to you at the present time except to thank you again very much indeed. (Applause.)

The Secretary continued reading the list of officers, members of the Executive Council and members of the Standing Committees for 1906, a full record of which appears upon another page.

Mr. George moved, seconded by Mr. Saunders, that Mr. Wilton C. Eddis be appointed auditor for the coming year. (Carried.)

THE PRESIDENT:—While we are waiting for the results of the ballot yet to come we may go on with the selection of the next place of meeting. It is open now for discussion.

Winnipeg's Invitation.

MR. DREWRY:—Mr. Chairman, I hasten to rise to my feet so as to forestall any other member of the Association who may rise to ask for the meeting to be held in the East. As outlined already in the communication received from Mr. Thorn, I may say that I have a message to this Association, a message from that far away Branch in Manitoba, which sends its greetings and asks you to meet next year in Winnipeg. (Applause.)

Personally, it would be a very great pleasure indeed if this can be brought about. I might say since coming here I have yet to hear any unfavorable comment on the part of those attending the Convention. There seems to be a general feeling that it would be in the interests of the Association to accept the invitation it is my privilege to extend, and although we have a very small Branch in Winnipeg, I can assure you we will do the very best we can to entertain the members and make their visit there a profitable and successful one.

We had the pleasure two years ago of meeting some of the members then on their pleasure jaunt, and it made a very vivid impression on my mind and on the minds of many others as to the advancement that would be made in bringing a larger representative body like that into the West, so that they might see closely what there is in the future of this country.

I would like to read, Mr. Chairman, some of the letters we have received from representative bodies there, so that if there is any doubt as to our ability to cope with this matter you may know we will be backed up in our efforts by some of the other bodies. First I will read the invitation on behalf of our local Branch.

Winnipeg, September 11th, 1905.

Mr. R. J. Younge, Secretary Canadian Manufacturers' Association, Toronto, Ont.

Dear Sir,—I have great pleasure in forwarding a most cordial invitation to the Association to hold their convention for next year in our city. This Branch, supported by the City Council and the business community, hope that the Canadian Manufacturers' Association will come and supply the men for the many manufacturing opportunities of the western land.

Yours truly,

WM. J. BULMAN,
Secretary.

(Mr. Drewry also read letters from the Winnipeg Builders' Exchange, the Board of Trade, and from His Worship, the Mayor.)

Now, Mr. Chairman, it is all very well of course to invite you to come to Winnipeg, but I feel satisfied that unless you could be comfortably taken care of, it would be a great mistake on my part and on the part of the local Branch to induce many of you to come away from your comfortable surroundings. I took advantage, therefore, to wire Mr. Whyte, of the Canadian Pacific Railway Company, in reference to the erection of their new hotel, asking whether I could give reasonable assurance with reference to it, and he wired me from Victoria, British Columbia, as follows: "You may give reasonable assurance that this company's hotel in Winnipeg will be ready to accommodate guests before this time next year."

I think that means a very great deal. It may not be generally known that the hotel the company is erecting in Winnipeg will be the largest and finest hotel in the Dominion of Canada. It is considerably larger than the King Edward of Toronto, and much larger than the Chateau Frontenac. So that if it is possible for this Association to hold their meeting there, and possible to inaugurate the opening of that hotel by the annual banquet, I think it would be something we should all aim for. There is room enough to accommodate all of you, even with the thousand new members which Mr. Ballantyne is going to get in. I hope they will all join in coming to Winnipeg a year from now, for you have something to look forward to in the West, there is no question about that.

I think we all, as business men, realize the great possibilities that there are in the West. You should go there and study the conditions, because, as outlined in one of these letters, there is no question that the American people are cutting more and more into our exports. There has been such a large number of Americans come in within the last two years that manufacturers in the United States are turning their gaze more and more towards these people whom they are anxious to follow.

In reference to taking care of the members I took occasion to wire Mr. Shaw, Traffic Manager of the Canadian Northern Railway, telling him that I was using every effort to secure the convention for next year, and asked him to strengthen my hands if he could by holding out some encouragement to take care of the members on a trip to Edmonton. He wired me and said: "You are authorized to offer the Manufacturers' Association a train over our line from Winnipeg to Edmonton if they decide to hold their next annual meeting in Winnipeg. And I have no doubt the Canadian Pacific will be glad to co-operate."

If it is possible to avail yourselves of that trip I think that very fact alone would warrant you in coming not only from Toronto and Montreal and contiguous parts, but from Halifax and St. John. I wish to read some words of Sir Wilfrid Laurier, spoken a few nights ago on his return to Winnipeg with Sir Gilbert Parker and others. They were all most highly delighted with everything they saw. Sir Wilfrid says: "As to the crops of the North-West no words can describe them. The quantity of fertile land there is, to the Eastern people, a revelation. I had thought that in the course of my experience I had witnessed the best things in the Dominion of Canada; I had seen the Valley of Annapolis in the Province of Nova Scotia, through which, as was said by Joseph Howe, you can travel for forty miles under apple blossoms; I had seen the valley of Richelieu in my own province, which I thought could not be surpassed; I had seen the fertile land of the Province of Ontario, between Cobourg and Sarnia, which is claimed to be the garden of Canada, but when you see the valley of Saskatchewan and the Red River valley growing under a crop of forty bushels to the acre, field after field, and mile after mile, of the finest land there is under tillage, you have but a faint conception of what the qualities of the Western country are. In fact, we don't know the extent of the riches we have. The more it is explored and developed the more we will come to the conclusion that we have here the best heritage which God could give to man." (Applause.)

MR. LLOYD HARRIS:—Mr. President, when I came to Quebec I came with the firm intention of making a strong attempt to

have the next convention held in Brantford. I brought down with me several pocketfuls of reasons why the meeting should be held there. I also brought with me the Mayor of the town to extend to you a welcome as well as an invitation; but I found in discussing the matter with several of the members present that Mr. Drewry had forestalled me. I find that he has canvassed this question; I find that he has got almost everybody to consent. Now, I am going to make this suggestion, that on condition we withdraw our request to have the next convention held in Brantford that everybody will agree to support Winnipeg unanimously. (Applause.) I have very great pleasure in seconding Mr. Drewry's resolution that the next convention be held in Winnipeg.

MR. MACDONALD (St. John):—It is with mingled feelings that I have listened to the remarks of Mr. Drewry, because my good friend Mr. Fisher and myself had formed a little plot a few days ago with the idea that we were going to capture the next annual convention of the C.M.A. for the winter port of Canada, St. John, N.B. (Applause.) It has been the hope of some of us for some time that we would have you in St. John as our guests. A few years ago I accidentally came to the meeting of the C.M.A. at Montreal, and at that time I was not well enough acquainted to get up at the proper time to make a bid for the convention; and my friends in Halifax, sleepy and all as they are generally, got in ahead. When I went home I pulled the wires and I endeavored to get the Association to meet in our city. At one time I almost thought I had succeeded, but unfortunately we didn't get you.

Personally, I was in a rather hard position, because when I listened at that time to the debates of the manufacturers of Canada I found that the great fetish, the great idea they had for the advancement of manufacturing in Canada, was a higher tariff. My early education had been somewhat different, and while I was a manufacturer myself I didn't see, eye to eye, so to speak, with that idea, but I thought of the words of the old hymn, "While the light holds out to burn, the vilest sinner may return." I thought, perhaps, I had better remain quiet and listen to the arguments put forward by gentlemen who didn't look at manufacturing from the same point of view that I did. I have listened, and I have read a good deal in the meantime, and I still have some ideas that are, perhaps, a little different from those held by the majority of the manufacturers here. In that way I didn't feel that I could take as active a part as I would have liked to.

But I know this, that the manufacturers will come down some day to St. John, N.B. I think my good friend Mr. Drewry has gained the day for Winnipeg. I think the Association will have a welcome there that will be in line with the welcome that St. John generally extends to its guests. St. John is not a very large place, and while we have not manufactured a great deal ourselves, we have always been buying more or less from those who do manufacture up here. Now, if you can keep it in mind, as soon as you have an open date, to drop down that way I am sure the people will do all they can to make it a pleasant visit for you. (Applause.)

MR. C. H. WATEROUS:—Mr. Harris has referred to me. I didn't know he brought me down here for the purpose of getting the convention to come to Brantford for its next meeting, and I hardly think it is fair for him to withdraw that application without first consulting me. However, as he has not done so, but has so graciously given place to Winnipeg, one of our youngest cities, and one, I am sure we are all deeply interested in, and would like very much to see, I would like to add to Mr. Harris' wish that for this year we make the decision to hold the next convention of the Manufacturers' Association in Winnipeg. At some future time I hope it may be possible for Brantford to put out such inducements as will bring this august body to that city. We will try our best to entertain you in a way that will make your visit pleasant and profitable. I have, therefore, very great pleasure in acceding to Mr. Harris' wish that Brantford

be dropped out, although I think he should have consulted me. (Applause.)

MR. AMYOT:—I am glad to see there is quite a bid for this next convention. I remember the time that there wasn't such a hustle to get these conventions. We were almost obliged to hold our meetings in the dark for fear we would be pointed out on the street. There were both sides of politics; they didn't know altogether what to do with us, but to-day we are in the position of the pretty and wealthy young lady, whose favors are eagerly sought after by a large number of suitors. This Association is getting very popular after being received by the King, and having crossed the seas on our new steamer—with a new attachment at that. It didn't go very fast, but at the same time it was a new boat. In fact we have become very popular. When you stop to think that Winnipeg is 1,700 miles away and that we can hold a convention next year very conveniently in that town, everything is feasible as long as you have got the Manufacturers' Association. For all these reasons I think we should grant the request of Mr. Drewry. I have very great pleasure in joining my vote to that of the proposer and seconder. (Applause.)

On motion of Mr. McNaught, duly seconded, the matter was referred to the Executive Committee with the recommendation that the convention be held next year in Winnipeg if at all feasible.

Vote of Thanks to Mr. George.

MR. FISHER:—While we are waiting for the result of the ballot I would like to take the opportunity to say a word or two that should be said. The majority of the gentlemen here want an opportunity to say something, or to give vent to their feelings along the line I am going to refer to, and that is in connection with the excursion to Great Britain during this past year. You are all aware of it very much better than I, as I had not the opportunity to join the expedition, but I speak with a good deal of feeling and some knowledge.

I think we should publicly take this opportunity to express our very sincere thanks to the President who, with his charming wife, so thoroughly upheld the honor of that occasion; who, both on the ocean going and coming and while there appeared before Royalty, appeared before the greatest men of the Kingdom, appeared before great audiences, practically on both sides of the channel and gave us very great honor. I think something has been said, but very much more has been felt with reference to the excellent manner in which our late President, Mr. George, carried forth the honors and the way in which he did our Association, and this country, very great good. Much more might be said; nothing more is necessary. I therefore take very great pleasure in asking you by a standing vote of this assembly to pass a vote of thanks, most earnest and hearty, to President George and to his wife for the excellent representation that they made for this country on the other side of the big pond. (Applause.)

THE PRESIDENT:—Before asking you to give a standing vote for our late President, Mr. George, I think it might be in order for me to state that I very heartily concur in all Mr. Fisher has stated; and as one who had the privilege of accompanying Mr. and Mrs. George and the other members to England, I can assure you that I was very greatly pleased and honored by the most capable manner in which he discharged the duties of President of this Association. (Applause.) I also heartily concur with what Mr. Fisher has stated with reference to Mrs. George. If Mr. George did well I think that Mrs. George is certainly deserving of her share of the praise. (Applause.) Mrs. George, according to her usual custom, was pleasant and entertaining on all and every occasion, and she upheld the dignity of her position to the fullest extent, and as one of Canada's daughters I can assure you we were very proud, indeed, of Mrs. George.

Now, gentlemen, I will ask you to give a standing vote of thanks to Mr. and Mrs. George as proposed by Mr. Fisher.

The members rose in a body and three cheers and a tiger were given for Mr. and Mrs. George.

THE PRESIDENT:—Mr. George, I have very much pleasure in tendering to you and to Mrs. George the thanks of this meeting for the very able manner in which you represented Canada on our late British excursion. (Applause.)

MR. GEORGE:—Mr. President and Gentlemen: So many kindly and pleasant things have been said to me by our members and in so many different ways that I have often told you before how difficult and impossible it is for me to return thanks in anything like an adequate manner. But on this occasion I can assure you it is more difficult than ever before. I feel more than ever before your kindness, and I appreciate so much your coupling with my name that of Mrs. George. (Applause.) It will be a very pleasant thing for her to know how you expressed your kindly feeling for the way in which she assisted me when we were abroad. It was sometimes a fairly arduous task, but I can assure you she got a great deal of pleasure out of it, and like everyone else her chief anxiety was that Canada should appear well in the eyes of our people in the old land, and that when we left there they would have possibly a better and higher idea of their Canadian cousins than some districts of the East had had in the past. I thank you on her behalf from the very bottom of my heart, and I cannot tell you how much I am pleased with this expression of your thanks. (Applause.)

The President called upon the scrutineers to report.

MR. TINDALL:—Mr. President and Gentlemen: Your scrutineers beg to report as follows: For First Vice-President, Mr. H. Cockshutt, of Brantford. (Applause.)

MR. COCKSHUTT, upon being called to the platform, said:—Mr. President and Gentlemen: I can assure you I deeply esteem the honor which you have done me in electing me First Vice-President of the C.M.A. I did not prepare a speech because I thought perhaps I might not be called upon to deliver it. Consequently if I do make some slips at the present time you will understand it is on account of my nervousness and my modesty and my retiring disposition. But I can assure you, gentlemen, I appreciate more heartily than I can express to you my election to this position, by reason of the fact that for the last six months I have not been amongst you, I have not met you, I have been in another part of the world. But while I was away from home, still at the same time I did not forget the Association of which I am so proud to be a member. I can assure you and the President who has just been elected that I will assist him in every possible way that I can to protect the interests of the Association, and whatever is for the benefit of the Association so far as I am concerned I will endeavor to carry out.

I feel that the late President, Mr. George, also deserves a great deal of credit for the able way in which he has conducted the affairs of the Association during the past year. I hope that his successor, Mr. Ballantyne—and I feel satisfied that he will—will be able to maintain the dignity of the Association in the same able manner; and knowing Mr. Ballantyne as I do I feel satisfied that the interests of the Association are in safe hands.

I have to thank you, gentlemen, for the confidence which you have shown in me by electing me to this honorable position. (Applause.)

Mr. Tindall announced the results of the balloting for Ontario representatives to the Executive Council, a full report of which is given elsewhere in this issue.

THE PRESIDENT:—Mr. Drewry, I wish you to convey the thanks of this Association to those who have sent us the invitation to go to Winnipeg. I will do all in my power to bring this matter before our Executive Council at an early date, and I take, therefore, great pleasure now in asking all those in favor of Winnipeg to please hold up their right hand. (Those present signified unanimous approval.)

I hope we will be able to give you some good news in a very short time.

MR. MCGIBBON:—Mr. President, I have for two or three years been a member of the Executive Committee at Montreal, and

I can testify to the excellent work done on all occasions by our General Secretary, Mr. Younge, and also by Mr. Cameron. I would, therefore, like to move a hearty vote of thanks by the higher convention here to Mr. Younge and also to his staff, as well as the branch secretaries. (Carried with applause.)

MR. MCGILL:—I move a vote of thanks to our Finance Minister, Mr. George Booth. I am sure every member of the Association will appreciate the work that Mr. Booth has done for so many years for us with such good feeling and so gratuitously. The work of the Treasurer carries with it a great deal of responsibility and is altogether a thankless task. I am sure Mr. Booth is worthy of our praise. (Carried with applause.)

THE PRESIDENT:—I have very great pleasure in offering this vote of thanks to you, Mr. Younge, and to your Secretaries and to Mr. Booth. I can assure you both if I did not know that I was going to have your hearty assistance throughout the year I would be very much afraid to assume my duties. It is a great pleasure to me to know I am going to have our father with us, Mr. Booth, and our untiring and able Secretary, Mr. Younge.

MR. YOUNGE:—Mr. President, I was waiting in hopes that Mr. Booth, as very much the senior officer of the Association, would acknowledge for us the vote of thanks that was very kindly passed by this meeting. I can only say, speaking for the members of my staff and myself, that while we work hard we have a great many encouragements; and there is nothing that we appreciate more than the many evidences given to us every month in the year, and every week in the month, and I think I am safe in saying every day in the week by the members of this Association; and so long as we can command the support that we have had in the past our duties will be comparatively light. I thank you very much indeed for those who are not able to speak to you as well as for myself. (Applause.)

MR. BOOTH:—Mr. President and Gentlemen: I certainly thank you for this new expression of confidence. My friend who moved this resolution said it was a thankless task. Well, Mr. President, that is the pay I get, it is thanks; if there were any other pay to it I should not hold the position.

While I am on my feet I want to congratulate the Association on having you in that chair. This Association has now the stamp of approval by the highest dignitary in the world, King Edward. Anyone who holds the office of President hereafter can say, "I hold an office approved of by the King." Besides that, you have the unanimous support of every member of this Association. I am sure that it is to you, as it is to me, a pleasure to continue in the office. I thank you for your approval. (Applause.)

MR. McNAUGHT:—We passed a vote of thanks a few moments ago to our retiring President which, I think, was not only unanimous, but from the very bottom of our hearts. I think it would be well if we marked his retirement in some more tangible form. I have, therefore, pleasure in moving that a committee be appointed and that some money be set apart from the funds of the Association to procure a fitting testimonial for Mr. W. K. George, and that it be presented to him on some occasion to be named by the Association.

MR. BOOTH:—I have very great pleasure in seconding the resolution.

The President put the motion, which on a vote having been taken, was declared carried.

THE PRESIDENT:—I thank you on behalf of the Association for your attendance. I hope we will see you all at the banquet to-night, and that you will have a safe and very pleasant journey to your homes.

I will now ask you to sing "God Save the King."

At 4.10 p.m. the members rose and sang the National Anthem, first in English and then in French, and after three cheers had been given for His Majesty the King the convention closed.



The Convention Banquet.



THE Convention proceedings were brought to a close by the splendid banquet, held in the Chateau Frontenac on the evening of Wednesday, September 20th.

The function was one well fitted to mark the termination of an event of such national importance. In the fine old dining salon of the Chateau covers were laid for two hundred guests, and at the hour appointed every seat was taken. The long white tables were daintily set with burnished silver and sparkling crystal, relieved here and there with a touch of color imparted by cut flowers and tinted candelabra. From a thousand incandescent bulbs, half concealed by the cornice in which they were set, a flood of mellowed light shone forth upon the wonderful panorama of historic scenes depicted upon the walls. In the life-like representations of Jacques Cartier, Champlain and LaSalle the very spirits of these grand old explorers seemed to live again, and to speak a word of encouragement to those assembled below to do honor to a common country. Optimism and loyalty were in the air. The feelings which for three days had been working to a high pitch, now found their most perfect and spontaneous expression, and every patriotic sentiment was applauded to the echo.

Mr. C. C. Ballantyne, the new Executive head of the Association, presided. At his right sat Sir Louis Jette, Lieutenant-Governor of the Province of Quebec, and at his left the Right Honorable Sir Wilfrid Laurier, Prime Minister of Canada. Many others, among Canada's most prominent public and business men, were guests at the head table, the list including Hon. J. D. Rolland, Mr. D. Lorne McGibbon, Mr. W. B. Tindall, Mr. W. L. Fisher, Hon. A. Robitaille, Hon. A. Tessier, Mr. G. A. Vandry, Mr. Emery (*London Times*), Mr. E. L. Drewry, Hon. S. N. Parent, Mr. Geo. E. Drummond, Mr. H. Cockshutt, Hon. Rodolphe Lemieux, Mr. W. K. George, Mr. W. K. McNaught, Hon. Chas. Fitzpatrick, Mr. R. L. Borden, Mr. Edward Gurney, Hon. Senator Choquette, Mr. Lloyd Harris, Hon. J. C. McCorkill, Mr. Geo. E. Amyot, Mr. Wm. Power, Mr. Geo. Booth, Hon. L. P. Pelletier, Mr. John Bertram, Mr. J. S. Larke, Mr. Geo. Tanquay, M.P.P., and Mr. J. C. Kaine, M.P.P.

After the elaborate menu had been served the President called the assembly to order and said: Gentlemen, I ask you to charge your glasses and drink to the health of His Majesty the King.

The toast was responded to in the heartiest manner, after which the Secretary was called upon to read some communications.

The Secretary announced that regrets have been received as follows from those unable to be present:

His Excellency Earl Grey, Right Hon. Sir Richard Cartwright, Hon. Sir William Mulock, Hon. W. S. Fielding, Hon. William Paterson, Hon. L. P. Brodeur, Hon. C. S. Hyman, Hon. R. Prefontaine, Hon. Sir F. W. Borden, Hon. S. A. Fisher, Hon. H. R. Emmerson, Hon. Frank Oliver, Mr. F. D. Monk, M.P., Hon. Lomer Gouin, Hon. J. P. Whitney, Hon. L. J. Tweedie, Hon. Arthur Peters, Hon. G. H. Murray, Hon. R. P. Roblin, Hon. Richard McBride, Sir Thomas Shaughnessy, Mr. Chas. M. Hayes, Hon. Adelard Turgeon, Hon. Jules Allard, Hon. L. Rodolphe Roy, Mr. E. S. Clouston, Mr. D. M. Parry, President, and Mr. Marshall Cushing, Secretary, National Association of Manufacturers of the United States, Hon. A. C. Killam, K.C., Doctor James Mills, Hon. E. M. Bernier, Mr. James Hardwell, Hon. Senator McMullen, Mr. John Bain and Mr. F. C. T. O'Hara.

In addition to these letters of regret, the Secretary read a cablegram that had been received from Lord Strathcona, signifying his pleasure in accepting an honorary membership in the Canadian Manufacturers' Association, which was received with prolonged applause.

THE PRESIDENT:—Your Honor, the Right Honorable Sir Wilfrid Laurier, Mr. Mayor and Gentlemen: I am sure you join

with the members of our great Association in the pleasure and honor we feel in having Lord Strathcona consent to become an honorary member of our Association. It is indeed a very great honor and one which we will prize very highly. (Applause).

I will now call on Mr. Duquette for a song.

Mr. Duquette responded with "Rule Britannia."

THE PRESIDENT:—Gentlemen, I will now ask our ex-President, Mr. W. K. George, to perform a pleasant little ceremony.

Presentation to Mr. Drummond.

MR. GEORGE:—Mr. Chairman, Your Honor, the Right Honorable Sir Wilfrid Laurier, Mr. Mayor and Gentlemen: I have been called upon to perform the very pleasant task of presenting to one, who has earned the respect and admiration of every member of this Association or did earn it and retains it—earned it during his term of service in the chair of the Presidency and has retained it ever since—of presenting to him a little token in memory of the services which he performed for us while he was our President. It has unfortunately come a little late, but that was due to circumstances over which we had no control, no opportunity time having been afforded when the presentation could be made. I want to present to Mr. Drummond an address on behalf of this Association which I will read to you and which I think probably conveys our ideas better than anything I could myself say.

GEORGE E. DRUMMOND, Esq.,
President

The Canadian Manufacturers' Association.

DEAR SIR:

As you retire from the Presidency of the Canadian Manufacturers' Association, the Executive Council and the members of the Association desire to express to you their high appreciation of the valuable services which you have rendered during your term of office.

The year has been an eventful one in the progress of the Dominion. The eyes of the world are turning towards Canada; new citizens are hurrying to our shores; our commerce is expanding; and our manufacturing industries are growing in number and importance. Commensurate with this growth, the national spirit of the Canadian people, always Imperial in its tone, is reaching forth to new and greater ideals both for the Dominion and the Great Empire of which we hope always to form a part.

The year has been marked by prosperity in every department of the Association's work. The membership has increased by twenty per cent.; the new Department of Transportation has been successfully inaugurated; and a great national excursion has been conducted through the western provinces of the Dominion.

In all these evidences of growth and activity, industrial and national, you have taken a prominent part, and the Association under your wise leadership, has shown the spirit of a truly national organization. In the splendid results obtained we recognize your enthusiasm, your courage, and your statesmanship.

These results will ever be your highest reward, but as a slight token of appreciation, we beg of you to accept this address. It is accompanied by the heartiest good wishes for the happiness and prosperity of yourself and family and the hope that you may long be spared to take an active part in the work of the Association, the building up of the Dominion, and the welding together of our Great Empire.

Signed on behalf of the Association:

W. K. GEORGE,
President.
GEO. BOOTH,
Treasurer.

C. C. BALLANTYNE,
First Vice-President.
R. J. YOUNGE,
Secretary.

The reading of the address was followed by applause. Handing it to Mr. Drummond, Mr. George, continuing, said: It is to me a great personal pleasure to be allowed to present this address to one whose friendship I am very proud of and very happy to claim. (Applause).

Three hearty cheers were then given for Mr. Drummond.

Mr. Drummond Replies.

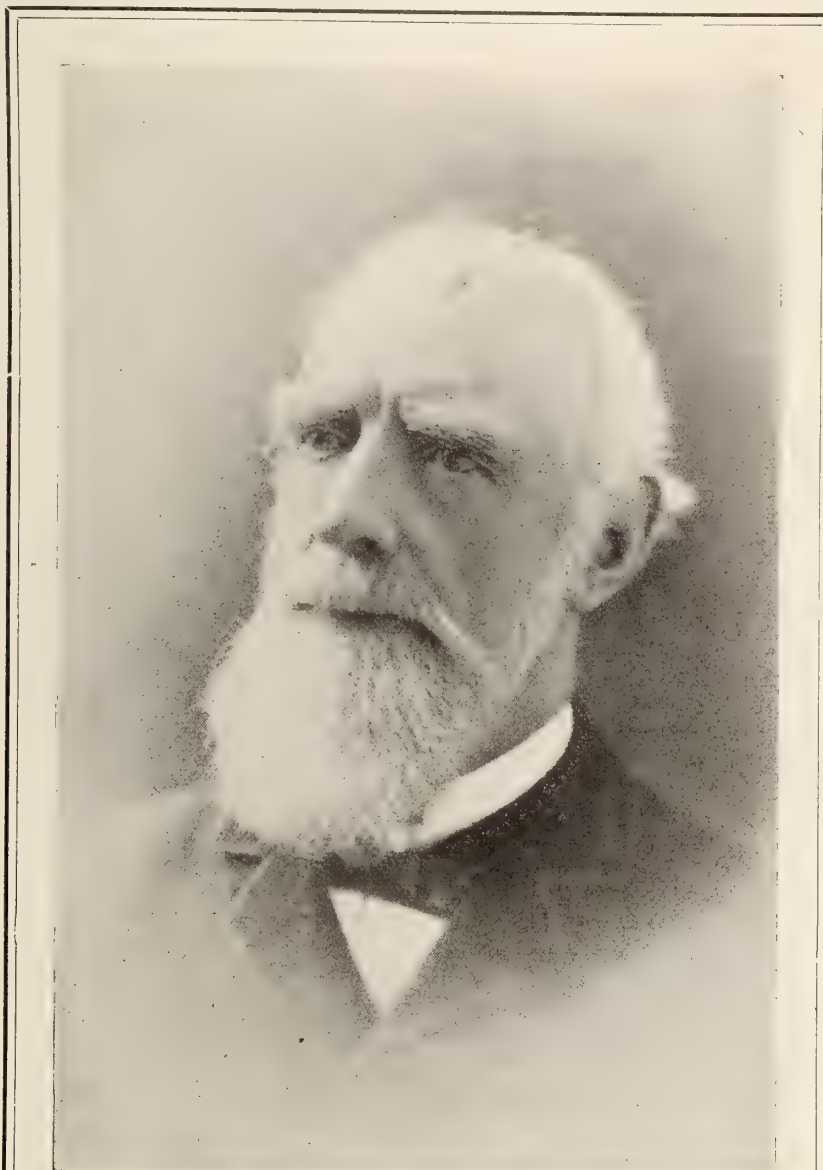
MR. DRUMMOND:—Mr. President, Mr. George and Gentlemen of the Canadian Manufacturers' Association: There are occasions upon which, and this is such an one, a man finds difficulty in getting words to show his true feeling. I am conscious to-night that if it be true, that it is more blessed to give than to receive it is certainly also true that it is much easier. At the same time Mr. George is a gentleman—every one of us will appreciate and endorse this—who honestly endeavored to serve this Association. I am sure you all appreciate that as I do to the fullest extent to-night. I appreciate very much indeed the honor that you conferred upon me, gentlemen, when in 1903 you chose me as your President. I told you then that I realized my many limitations, but as a good Canadian I took up the work that you imposed upon me and I carried it out to the best of my ability and placed all that was in me at your disposal. I did it because I believed that in helping to build up the industrial interests of this great country, in helping labor and capital in this beloved Canada of ours, I was, in my humble way, helping Canada herself. (Hear, hear).

Mr. Chairman and gentlemen, I was fortunate in possessing the confidence of the members of this Association; I was fortunate in having the active support, and the loyal support of an exceptionally good Executive Committee. We were all fortunate and I think more than ordinarily so in having the offices of the general and branch secretaryships of this Association filled by men whose loyalty and tact and energy and ability we could absolutely depend upon. Therefore the honor of that year you refer to, Sir, rests largely upon the general officers of this Association. As to the work we did, time forbids me to go into it fully, but I think that our trip to the great West, that magnificent West

which my friend Sir Wilfrid Laurier will tell you of to-night in his eloquent terms—I say that trip to the great West did some good. We went out about 170 strong, and we went out to meet our brothers in the West, to make them feel we in the East were brother Canadians, we were all working for the upbuilding of our country and for the consolidation of our beloved Empire; and when we went out to the West we were received royally; we discussed the great questions that were naturally worrying our representatives and the Government at Ottawa—the great question as to whether the West would support the East in these great industries we are trying to

establish here and hope to establish also in the West, and to let them know the East would support the great want of that country, transportation, and give them the transportation facilities that were necessary, and back the Government up in giving it to them. We learned somewhat to know them and they learned somewhat to know us. It was a very great pleasure to me to be able to sit quietly down in the meeting and find that to a man the eastern manufacturers were in favor of going to Winnipeg in 1906.

Well, that trip to the West was a great thing. One of the greatest works we took up during the time I had the honor of serving you was the work of our education campaign. We believed, situated as we were in this country, it was absolutely necessary that efficient protection should be given to our industrial interests throughout the country, whether they were the interests that we represented or those of the farmers. We believed the condition should be viewed and we should approach it from the standpoint of men in active fight against the competitors to the south and the world over. We should tell them what



LORD STRATHCONA AND MOUNT ROYAL, G.C.M.G.,
(High Commissioner for Canada in London),
Honorary Member Canadian Manufacturers' Association.

we thought and what we knew, and that propaganda should be put through strongly as a Canadian policy. We have been talking of tariff, and the Government have at last given us the commission we desired and which we think will eventuate in a thorough revision of the tariff for the good of Canada. For the Government have the interests of Canada just as much at heart as any of us of the Manufacturers' Association have. I think I may speak also for the Opposition. When that general revision of the tariff comes and the commission gets to work it is our duty to help them in

every possible way. Let us settle our own differences in our different sections between ourselves, and present to them an undivided front that will enable them to deal with the question intelligently and give us a scientific tariff that will bring Canada into the front rank as a manufacturing country. (Applause). I believe the Government will do that for us. They will look into it fairly and squarely and deal with it reasonably and well.

That is the position with regard to the tariff. Then we have spoken, and have nailed our colors to the mast, on this question of the support of the Government in a preferential tariff arrangement for the Mother country and the colonies. I hope we will see when this tariff is made we will have two objects in view, the upbuilding of Canada and the consolidation of the Empire. (Applause).

I was very fortunate last year to be able in England to do something for that great excursion, that magnificent trip that the manufacturers have taken during the past few months, which has resulted in so much honor for Canada and for our late President, Mr. George, and for Mr. Ballantyne who went with him, and for the other ladies and gentlemen of the party, and Mrs. George—may I refer to her particularly. (Applause). I was glad to be able as your President to make the arrangements with the London Chamber of Commerce; and no doubt that helped to make the excursion a success. It was a very great pleasure to see Mr. George, my successor, who had been so loyal to me when Vice-President, go to England and represent Canada so nobly.

Gentlemen, I have taken up too much of your time when there are so many magnificent speakers coming on later in the evening. I am deeply grateful, gentlemen, for the evidence of your approval and your kindness to-night. I cannot help feeling that you magnify in your kindness the services I have rendered. But perhaps, gentlemen, that makes me value all the more the friendship of the members of this Association; and the token that you have given to me, well, I can say for myself—yes, I can say for my family and myself—that we will treasure this in the future as marking what there was a great pleasure to me in doing, the work of the Association, and in which I made the friendship of the leading captains of industry in Canada, and the members of the Government and the Opposition with whom I had to come in contact. I thank you, gentlemen, for the hearing you have given me. (Applause).

The President's Inaugural Address.

MR. BALLANTYNE:—Your Honor, the Right Honorable Sir Wilfrid Laurier, Mr. Mayor and Gentlemen: It is with the greatest pleasure that I welcome you to this 34th Annual Banquet of the Canadian Manufacturers' Association. We have just closed the greatest convention of Canada's greatest national Association. How fitting that we should gather at the gate of our great Dominion, on the historic spot where the foundations of our nationhood were laid, to celebrate the wonderful progress of the century and a half which we have left behind!

In those days there were no industries save the crude axes of the pioneer; to-day the hum of machinery resounds from coast to coast. In those days there were wars and factions in our land; to-day we have peace and prosperity hand in hand. In those days there was but the germ of a struggling colony; to-day we stand a united nation, attracting the attention of the world.

We are met to-night under the auspices of a great Association. As business men engrossed in the somewhat confining spheres of industry, we are grateful for an organization which brings us together from the scattered provinces of the Dominion to discuss great national issues and to determine policies upon which (with the assistance of our Governments) depend the success of the great industries which we represent.

Let me say to you, gentlemen, that no one could have attended the convention just closed without being struck with the national importance of the issues discussed, and feeling that business statesmanship which characterized the discussions. Why should it not be so? Who should understand the problems of our statesmen so well as our business men? And who should so thoroughly understand the ebb and flow of prosperity or the storms of foreign

competition, as those captains of industry whose hands are guiding the wheels of commerce into the great future which awaits us!

What we need in this young Dominion is *national co-operation*. What folly to talk of the success of manufacturing in Canada unless our farmers are prospering! How foolish to speak of better conditions for the workingman unless our factories are humming, and how vain to think of making the farmer happy unless we can provide a home market at his door, and diversified industries for his sons and daughters!

We are greatly honored to-night by the presence of one who has done more than any other Canadian public man to foster and bring about this grand national Canadian sentiment, of which, irrespective of creed or nationality, all Canadians are now so proud. I refer to that great British Canadian statesman and our beloved Premier, the Right Honorable Sir Wilfrid Laurier. During his long and brilliant career, not only in the public eye of Canada but of the whole British Empire, he has, by his eloquent words and great acts, successfully proclaimed to all Canadians, whether English, French, Irish or Scotch, that they should first and above all be Canadians and loyal subjects to the British Crown. This Association has striven to aid him in this great work, and we are grateful of this opportunity to acknowledge and thank him.

We need national co-operation also among the people of our scattered provinces. Who would raise unnatural barriers between our provinces? Who would tax in one province the legitimate business houses of any other province? Who would draw a line between the French and English Canadians or separate in any way the interests of the East from those of the West? I answer that the politician or the business man who would encourage such provincial measures is the enemy of our young Dominion. I am proud to say that the Canadian Manufacturers' Association is national, not only in its scope, but in its views. Those who have so wisely guided its policy in recent years have certainly appreciated the fact that the people of Canada are too few, and the task before us in building up our Dominion too great, to permit of any dissension in our ranks.

Let the year upon which we are entering, then, be a year of national co-operation, and let the business men of Canada stand in the very van.

I wish now briefly to refer to the accomplishments of our National Association; what we have accomplished in the past, what we hope to accomplish in the future.

I have referred to our Association as "Canada's Greatest National Association." I think, gentlemen, that we have every right to make this statement in view of what our Association has accomplished in a broad national way within recent years. I will not detain you by going back to the early history of our Association when it was formed in the year 1871, or to trace in detail the ups and downs that it encountered between the time of its formation when it was formed in the year 1871, to trace in detail the what our Association has accomplished since the year 1899, when it was re-organized and a union brought about with the manufacturers of Montreal, and made truly a Dominion and National Association.

Prior to 1899, the year of our re-organization, our Association was scarcely known beyond the cities of Ontario, and had a membership of only 132; to-day it is one of the strongest national organizations in existence, with a membership of 1,839, whose total invested capital is \$450,000,000, with branch offices in six of the largest cities, with special sections of its most important industries, working through well equipped departments, capable of solving in the most practical manner the many problems which are facing the rapidly developing industries of Canada.

National Achievements.

Aside from the great benefit our Association is to its members, and the many benefits that all derive from our well organized various committees, such as Transportation, Insurance, Tariff, Parliamentary, Commercial Intelligence, and the information contained in our valuable monthly magazine, INDUSTRIAL CANADA,

our Association has accomplished greater things than these. I refer to what it has achieved in the way of national, and I might say imperial, importance.

Our organization, as it now exists, brings over 1,839 members, engaged in various manufacturing pursuits from one end of this broad Dominion to the other, closer together, and as a result benefits not only the individual member of our Association, but also Canada. We understand each other as we never did before; there exists not only among the manufacturers of Canada, but in the hearts of every Canadian to-day, more national Canadian spirit, more ardent love for Canada and the Empire than ever in the past. If our Association has only accomplished this, it would have done a good work.

I am still a young man, but I can remember, not more than twenty years ago, when I was engaged as a commercial traveller in Canada, that one often heard the remark when calling on a merchant to solicit orders for his wares, that he did not buy "made in Canada" goods, that he bought instead either American, German, or some other foreign make, and prided himself on the fact that "made in Canada" goods were not good enough for him or his customers to buy. What do we find to-day? This feeling completely reversed, and not only the seller, but the buyer and the consumer in Canada insists on having goods made in Canada. Why should this not be so? The Canadian manufacturer, if given the same opportunity, is as capable as any other manufacturer in the world.

Providence has given Canada every natural resource, and she is as richly endowed as any other country in the world, and all that Canada has needed has been confidence and national pride in herself, and in her ability not only to make all the goods that her home market required, and as good as can be made by any other nation, but also to stretch out in the most successful manner for foreign markets.

Our future prospects are bright, our responsibilities great. Canada has been making history and making it at a rapid rate, especially within the last twelve months. It is now just a year since we held our last annual banquet. What great national events have taken place in that short time? Our Government, whose great leader has honored us with his presence to-night, has passed legislation creating two new provinces in our boundless North-West—Alberta and Saskatchewan.

Another great national event in our past year's history has been passed by the Parliament of Canada, in granting a charter authorizing and assisting in the building of the second transcontinental railroad—The Grand Trunk Pacific.

When we pause for a moment to reflect what these two great national undertakings mean for the future development not only of the North-West, but of the whole of this vast Dominion, is it to be wondered at that we should feel enthusiastic, and as manufacturers be prepared for greater expansion in every direction?

Canada is prosperous; those engaged in all pursuits, whether it be agriculture, mines, fisheries, forest or manufacturing, broadly speaking, are all enjoying prosperity. Should we rest here? I am sure you will agree with me—we must not. We have only just begun. Those of us who are engaged in industrial life see wonderful possibilities ahead of us, we can see the great prosperity that now exists, greatly increased to the still further advantage of Canada and the Motherland.

We believe that when the tariff commission now visiting the important centres have finished their investigations, our Government will give us the most scientific practical tariff Canada has ever had, not framed in the interests of the manufacturers alone, but framed to meet the requirements of all, whether he be manufacturer, farmer, working man, or consumer.

We hope that with Mr. Fielding's three suggested tariffs—Maximum, Minimum and British Preference, Canada will prosper as she has never prospered before. While it is true, our Association stands loyally by our policy of sufficient protection for our established industries, and the same amount of protection for new industries when the opportunities arise for their commencement, it is our earnest desire that the great amount of manufac-

tured products that we do not now make ourselves shall be purchased from the mother country.

We do not like to see by the trade returns that our imports from foreign countries amount to \$100,000,000, compared with our imports of \$45,000,000 from Great Britain. We trust that this condition of affairs will soon be reversed, and that the balance of trade will always be in favor of the Motherland. In the words of the Right Honorable Joseph Chamberlain, "Let us all buy of one another; commerce of that kind is twice blessed, like the quality of mercy, it blesses him who takes and him who gives."

Gentlemen, this Association will continue to do its part in the way of building up Canada for the Canadians, and assisting always to draw the great imperial bonds of unity between Canada and the Motherland and the whole Empire closer together. We are proud to be Canadians, and prouder still to be British subjects. (Applause).

The Lieutenant-Governor.

Now, gentlemen, I will call upon Mr. Edward Gurney to propose the toast "The Lieutenant-Governor of the Province of Quebec."



MR. EDWARD GURNEY.

MR. GURNEY:—Mr. Chairman, Your Honor, Sir Wilfrid Laurier and Gentlemen: I had the honor of presiding over this organization away back in 1878, and I cannot remember ever having had a fatted calf killed for me. I cannot remember any occasion of this kind in those old fighting days. I did not know until the other day how early I had arrived on the scene. But in visiting the National Club in Toronto not long ago I heard two men talking, and they were talking about what George had said to Edward and what Edward had said to George. (Laughter). In those days we lived on hog and hominy, and I fear that though I also am a young man still, that the time will not arrive for me when I shall be in the enviable position which is occupied to-day by yourself.

It has been enjoined upon me to-night by two of the officers of the Association that I should not make a speech, and notwithstanding

ing that, however, I do want to say a few things about what I would like to speak upon. I would like to deliver a protection address in the presence of Sir Wilfrid Laurier, because I was a protectionist away back in the times when the United States brought all their iron in from England and Scotland to make goods out of. To-day England is making 6,000,000 tons of iron a year, while the United States is making 24,000,000 of tons. I lived away back in the time when it was laughed at as an impossibility that Canada should ever grow to that point where she could make her own iron. To-day she is making nearly, if not quite all, her own iron. Although I am a large user of iron, I am a strong believer in the taxing of raw material.

I would like to say how much I think of this good city of Quebec. I have been here before, but I came with all the commercial instincts strong upon me for the purpose of getting men here to do business with my concern. But I have been here this time under the guidance of a good lady who can see the sentimental side of Quebec and has made me see it; and I would like to say to the people of the Province of Quebec and to the citizens



THE HON. SIR LOUIS A. JETTÉ, K.C.M.G., K.C., LL.D.,
Lieutenant-Governor of Quebec.

of this good city of Quebec: "Don't let the commercial instinct get in here so strongly as to change this beautiful city." (Hear, hear).

I would like to say a great many things upon a great many subjects, but I have the fear of these officers before me, and now I will call upon you to drink the health of His Honor the Lieutenant-Governor of Quebec.

The toast was responded to and three cheers were given for the Lieutenant-Governor.

SIR LOUIS JETTÉ:—I thank you, Mr. Gurney, for the toast you have just proposed, and you, gentlemen, for receiving it so kindly.

The Province of Quebec is proud to-day, gentlemen, to see you assembled in its capital city. None of us ignore the constant efforts you make for the enlargement of our trade and the progress of our country, and every one knows the great success which your delegates achieved, during their recent visit to Great Britain and France—a success mostly due to your late President, Mr. George

—and we are glad of this opportunity to join in the congratulations you have already received everywhere. Your Association is now, more than ever, in the eye of the public, and the attention of the world has been drawn to your deliberations and proceedings.

The choice of this city for your place of meeting for the present year is, therefore, an event which we could not fail to appreciate, and I am sure that you have already had many occasions to feel that this sentiment is true, sincere and unanimous.

It would be out of place for me, gentlemen, to make you a speech on this occasion. You are all men of business, appreciative of the value of time, and I am sure that you will prefer to hear some of those gentlemen whom I see at this table, whose words have the advantage of authority to convey confidence in the maintenance of what is good, and hope for what might be better, for the welfare of this Dominion.

I will therefore confine myself to the expression of my thanks for the favor of your invitation to this grand demonstration, and the opportunity so afforded to meet so many distinguished representative members of the great industrial and manufacturing interests of our common country. (Applause).

At the request of the Chairman, Mr. Duquette responded with another song entitled "O Canada!"



Canada and the Empire.

MR. BALLANTYNE:—Before calling on my friend the Honorable Rodolphe Lemieux to propose the toast "Canada and the Empire," I wish to say that our Association has already placed itself on record on two great national questions, namely, British preference and military defence. It has been a great pleasure to the members of this Association to know that the Canadian Government has granted a preference on British goods and also to know that they have taken over Halifax and Esquimalt, and thereby assumed a certain proportion of Imperial military defence; and we know and have confidence in our Government that as they grow stronger financially they will do greater things in this direction. (Applause).

Gentlemen, I have very great pleasure now in introducing to you the Honorable Rodolphe Lemieux, Solicitor-General, to propose this toast, "Canada and the Empire." (Applause).

THE HONORABLE MR. LEMIEUX:—Mr. Chairman and Gentlemen: Your warm and hearty welcome, flattering as it is, is not, however, a surprise to me. Long ago I have learned to appreciate your generous hospitality and your unfailing courtesy, and vain I would be indeed if I were to take for myself the cheers which this toast has elicited, for I know no body of men in this fair land of ours more loyal to Canada and the Empire than the Manufacturers' Association. (Applause). And I make bold to say that you are only now giving expression to that noble sentiment which is so deeply rooted in every true Canadian heart, love to our native land, pride in her mighty achievements and unflinching loyalty to all her institutions and the flag which protects them. (Applause).

Sir, Canada is above all a country of contrasts. Nature, mother nature, seems to have adorned her with its most precious gifts: a winter salubrious and bracing under its northern lights; a spring of rushing maturity; a summer alternating with its fresh breezes and its temperate heat; but, above all, an autumn with a luxuriant foliage of unsurpassed beauty. (Applause). Is there, Mr. Chairman, under the canopy of Heaven a sight of more poetic grandeur, a panorama of more picturesque design than the one which your eyes have met walking afield since yesterday? The crimson leaf will soon be dropping from the maple tree, but before it has fallen, before the grey days of autumn are reached, all nature will blazon its recurrent warnings in letters red and gold, timorously at first, then more and more blatantly.

Canada's Prosperity.

But this is only sentiment and I forget I am speaking before the manufacturers of Canada, and I hasten to say that the prosperity of our Dominion is on a par with her beauty. Canada,

Sir, needs no advertisement now-a-days, not as much as she did when Mr. Gurney was Chairman of the Manufacturers' Association. Suffice it to say that we as Canadians have received from Divine Providence an inheritance as great, as rich, as remarkable as was ever entrusted to any other portion of mankind. (Applause). And I do not hesitate to predict, repeating here the words of that great Canadian, the Right Honorable, the Leader of the Government, that just as the nineteenth century has been the century of the American Republic, so will the twentieth be the century of the Canadian Commonwealth. (Applause).

For many years past the bulk of emigration went southwards, swelling, so to speak, the still larger emigration which went directly to the western lands. But that has ceased at last, and the creation of the two new sister provinces, Alberta and Saskatchewan, bears witness to that fact. Since the last ten years the influx of population has been such as to warrant us in saying that at last the tide has turned our way. The story of the crops in the West would indeed be a fairy tale worthy of the pen of Sir Gilbert Parker, if we did not know, forsooth, that reality is sometimes stranger than fiction. Our mineral wealth is simply enormous, as evidenced by what I saw only the other day at Sault Ste. Marie. Our manufacturing industries are increasing year by year, by leaps and bounds, thanks to your spirit, your British spirit of enterprise, gentlemen; thanks also to a wise fiscal policy, a policy which if it stands any modifications, will, I am sure, protect, how shall I say—I shall ask advice from my esteemed friend Mr. Borden—protect adequately the consumer and the producer. (Applause).

Looking forward and glancing into the near future, I can see this Dominion, like a young giant, sitting astride the Northern Continent, commanding two oceans into which its great railway systems pour the ever increasing wealth that is being gathered from her teeming resources as yet but scarcely developed. Sir, it takes no prophet to foretell to what dimensions our trade must swell with such an unlimited capacity for the production of such inexhaustible wealth and resources. Sir, when Goldsmith sang—you have read Goldsmith—sang in the Deserted Village, "Ill fares the land to hastening ills a prey, where wealth accumulates and men decay," he did not refer to their wealth as I have already described, but evidently to unjust wealth gained at the sacrifice of others.

Sir, fortunately for this Dominion, the relations between capital and labor are not as strained as they are to the south of us in the American Republic; and if our wage earners as true Canadians will only remain true and faithful to themselves, and not yield to the commands of foreigners and seek their advice, they will have not only the confidence, the respect, the friendship of their employers, but they will command the respect of all their fellow countrymen.

The British Empire.

Sir, you have coupled with this toast to Canada that of the British Empire, that Empire to which, using here the words of the great American Orator, Daniel Webster, "Rome in the very height of her glory could not be compared," a power that is dotted over the surface of the globe with its possessions and military posts; whose morning drumbeats, following the sun and keeping company with the hours of the day, circle daily the earth with an unbroken and continuous strain of the martial airs of England. Sir, Canada is more than a possession, Canada is more than a crown colony, or a military post, as it was fifty or sixty years ago. Canada, Sir, is a nation within the British Empire. (Applause). And using here the words of Mr. Chamberlain himself, "It is precisely the very slenderness of the silken tie which binds the larger colonies to the mother country, which insures its durability." Sir, the British Empire would be a mere name if the larger colonies had not, as the Pilgrim Fathers of old, borrowed from the Motherland those controlling principals of freedom which are at the base of the British constitution. (Applause). And if you ask me, Mr. Chairman and gentlemen, if you ask me, a French Canadian, why I am a loyal

subject of His Majesty the King, why I am so deeply attached to the institutions of Great Britain, I answer unhesitatingly at once, it is because I receive under her flag all the protection which I need; it is because reading history I find that Great Britain throughout the world and throughout history has been the nursing mother of liberty; that alone among mother nations she has understood, she has brought to perfection the art of government; it is because she has never varied from that old Anglo-Norman principle, "No taxation without representation." (Applause).

Never, Sir, was the strength of the British Empire better illustrated than during the latter portion of our late beloved Queen's reign. If the royal pageants of 1897, and the Jubilee of 1900 were surpassed in splendor and lustre and pomp by the famous field of the cloth of gold, they, however, will remain unique in this modern history for their vast political significance, because there it was seen that, unlike the emperors of old who drew to their chariots the barbarian horde, the Queen upon ascending the throne, said to Lord Melbourne, "I will be good." The Queen has kept in the bonds of love the nations, aye, the



THE HON. RODOLPHE LEMIEUX, K.C., M.P.,
Solicitor-General for Canada.

creeds of heterogenous nature; her motive of power has been liberty and not despotism; her glory has been peace not war; her triumph was not the command in obedience of victorious legions, but the truer and the nobler expression of loyalty.

Sir, for those who do not realize what is the British Empire, I wish they could have witnessed, as I did a few weeks ago, the imposing sight of the British squadron anchored in the majestic harbor of Quebec. As a Canadian I felt proud of those men of war which, on the far seas and flying the British standard, are the seal for the extension of British territory. Because, as the Minister of Justice will inform you this evening, it is an old axiom of international law that the country follows the flag.

Sir, if in both hemispheres the very title of British citizenship confers a privilege; if it commands an indisputable prestige; if in the remotest parts of the world this famous invocation of Palmerston, "*Civis Britannicus sum*," (I am a British citizen), is not made in vain, must we not assign it to a large degree to the British Navy?

Sir, this famous statesman whose name I have just mentioned, had probably in mind the flying squadron, the squadron always ready to cast off its moorings and raise its anchors to rush for the protection of any British subject in whatever part of the world he is, when in the House of Commons, in 1853, he made that famous historical allusion, as the Roman in the days of old held himself free from indemnity when he could say, "*Civis Romanus sum*," so also the British subject, in whatever land he may be, may always feel the stronger because of the watchful eye of England when he is unjustly aggrieved.

The Entente Cordiale.

But why should I recall past events? Have we not but a few days ago, here at the very gates of this quaint City of Quebec, written a page of history the most memorable, perhaps, of our national existence? Sir, blind would he be who could not perceive in the presence of those British ships lying in the waters of Quebec a renewal of the friendly scenes which you have witnessed, Mr. George, which took place between English and French sailors in the British Channel. (Applause). Deaf indeed would he be who could not detect in the cheers which greeted His Serene Highness Prince Louis of Battenburg, his gallant officers and his sailors, the voices which on the rocking waves of the British Channel mingled and united into one captivating harmony.

And, Sir, what more fascinating spot, what more ideal scenery could both England and France have selected to display their everlasting alliance before the world than Quebec? Here at the citadel in days gone by floated the French flag. Up there yonder on the Plains of Abraham, fell two heroes, Wolfe and Montcalm, who by their death won immortal fame. Sir, I say, over a century has elapsed since these stirring events, but during that long period of time the flag which protected the rights, the franchises and the liberties of my forefathers, of my fellow countrymen, is the same flag which is being hoisted every day on the mizzen masts of the British Navy. So I say that if the *entente cordiale* which, thank God, now exists between France and England, was necessary, was useful there beyond the Atlantic, it is doubly beneficial to us Canadians, Canadians who have a common destiny on this northern continent, though we have a different language and a different creed. Sir, for my part, I believe that the *entente cordiale* between France and England will have a lasting influence over the destinies of Canada. I believe that it will draw closer together the two larger elements of our population; it will bind, so to say, into one sheaf the aspirations of both races; it will obliterate prejudices and bring into bold relief virtues and qualities hitherto unknown; it will cast into oblivion racial passions and will bring instead peace, contentment, amity, concord and harmony. (Applause). It will, in a word, give our young country, give this rising country a new impetus towards progress, with inspiring love of justice and liberty under the edges of the British flag which is ours and that of the British Empire.

Two Significant Incidents.

But, sir, I have already trespassed on your patience, and I should resume my seat. Let me, however, before I do so, relate two incidents of late occurrence. I shall be brief. It was my good fortune, indeed it was my privilege, a few weeks ago to accompany His Excellency, The Governor-General, Earl Grey and His Serene Highness, Prince Louis of Battenburg, to the old Ursuline convent in the City of Quebec, the Ursuline convent, that holy body as ancient as the most ancient relics of Quebec, where each wall is by itself a page of history. We had entered the little chapel still fragrant with the mist of incense floating in the ambient air, where the echoes of the service seemed to linger, and in the distance was that little lamp which the piety of the good nuns, like the vestals of old, had kept burning since the first siege of Quebec, when suddenly I noticed His Highness, the Prince, bowing reverently before a monument. He was dressed in his full admiral's uniform. Coming nearer I read on the marble this simple yet eloquent inscription, "Honor to Montcalm.

Fate which snatched a victory from his hands has rewarded him by a glorious death."

Sir, a few days previous in the very heart of London on Trafalgar Square, a stone's throw from Westminster Abbey, beside the statue of Charles I, Admiral Cailier and his gallant officers of the French Navy had saluted that column, protected at its base by four giant lions, at the summit of which Nelson seemed as of yore to command his host and to shout the famous words, "England expects every man to do his duty." (Applause). If any one will consider and will compare these two acts of profound international courtesy, he will not fail to realize, Mr. Chairman, that the *entente cordiale* between both of our mother countries is not the mere whim of a visionary mind, is not a mere creation, but is a startling reality.

Mr. Chairman, when in 1759 General Montcalm, betrayed by the fortunes of war and fatally wounded on those famous plains, which my friend, the Mayor of Quebec, has kept to us Canadians as hallowed ground, (Hear! hear!), when General Montcalm was breathing his last just a few steps from this room; and when half a century later in October, 1805, and under other latitudes, Admiral Nelson fell on the deck of the "Victory," giving to his grateful country with his life the supremacy of the ocean for years and years to come, both France and England were adding to their already rich treasury of glories, still more imperishable glories. But when a century after that, another century of conflict and strife, less cruel, but as bitter and as terrible in their consequences for us, their sons of the new world, those two great nations forgot at last their old feuds, and remembering their old common Norman ancestry, and calling a halt in the name of humanity, sealed in a common, solemn, and, I hope, lasting compact, their mutual friendship, was it not, I pray, highly appropriate that they should give the world as a test of their good faith the consoling sight which of late has filled our hearts with hope and joy, that of a French Admiral gracefully saluting, amidst the deafening cheer of a London multitude, a statue of the hero of Trafalgar; and that of a British Admiral offering his silent yet sincere tribute to the ashes of the hero of Caron, the defeated general of the Plains of Abraham, in the modest chapel of a French Canadian cloister, refulgent only with the glittering and glowing rays of the parting day and under the solitary eye of God Almighty. (Prolonged applause).

THE PRESIDENT:—Gentlemen, with me you have all enjoyed more than I am able to convey to you the very eloquent speech delivered by the Honorable Rodolphe Lemieux. But, gentlemen, you have yet to hear from the silver-tongued orator not only of Canada but of the British Empire. This city of Quebec no doubt thinks that it has special claims on our Premier, Sir Wilfrid Laurier. Quebec has the distinguished honor of having the Premier represent them, and it is a great honor indeed; but, gentlemen, the Right Honorable Sir Wilfrid Laurier is as much beloved in every province of this vast Dominion and in every city and hamlet as he is in this good city of Quebec.

Gentlemen, I have very great pleasure in introducing Sir Wilfrid Laurier to reply to the toast of "Canada and the Empire."

Sir Wilfrid, on rising to speak, was greeted with three hearty cheers.

THE HONORABLE SIR WILFRID LAURIER:—Mr. Chairman, Your Honor, and, if I may be permitted to look aside, ladies and gentlemen: The most admirable speech which you have just heard from my friend and colleague, Mr. Lemieux, prevents me from answering anything at all upon the subject which composes the matter of this toast; and if I am allowed upon this occasion to do what politicians are not always allowed to do, that is to say, to follow my own inclinations, I would, sir, before everything offer you my very sincere congratulations as an old friend, as an old personal friend, upon the fact that you have been this day as I understand elected to the supreme post which is in the gift of the Manufacturers' Association of Canada. You have been called upon by the confidence of your fellow associates to fill a post which has been filled by many able men in your Association.

My memory cannot go as far as the days of which Mr. Gurney spoke a moment ago. My association with your organization does not go back to the year 1878. It does go back only four or five years, but in that short space of time it has been my privilege to come in contact with many, and I may say all, of the presidents of the Association, and I can only say, sir, that you have a worthy line of predecessors to follow. I shall not name them all or refer to all of them, but I may be permitted perhaps to refer to the last two, my friends Mr. George and Mr. Drummond. Mr. Drummond has signalized his incumbency of office by taking the Association to the new fields of the West; Mr. George has signalized his incumbency of office by following a directly reverse course and taking the Association not to the West, but to the East, to the seat of the Empire, of trade and commerce.

I am at a loss to know what you shall do coming immediately after two such examples and two such predecessors. Perhaps, sir, it will be your fortune and your lot to carry this Association to what you have termed yourselves a scientific tariff. (Laughter). But, sir, if you do that, allow me to say I cannot pay you a very great compliment on that account, for, in my estimation, if you achieve that much you will not have achieved a great deal, because it seems to me that at the present time the Canadian tariff is not far from being a scientific tariff. At all events in saying that I express my own opinion. I cannot say that I express the opinion of all. Perhaps there may be some at this table who may say that though we have a scientific tariff we have not yet reached the goal of adequate protection. I express no opinion on that point. Time only will tell as to that. At all events I can only say that we are all engaged in making the tariff a scientific one, and I welcome most heartily the spirit in which the subject has been approached this evening, reflecting as I imagine the inner feeling of the Association that we shall have a tariff which will give equal justice to the manufacturer and the consumer. (Applause).

My friend Mr. Lemieux has spoken with his usual eloquence, an eloquence which is perhaps new to some of you gentlemen, but which is not new to me or to his old friends. What you have heard to-day is what we hear every day whenever Mr. Lemieux speaks on any subject. He has spoken of the glories of Canada and the British Empire. But in his own words you can detect—I thought myself I could detect—that within the Empire itself there are degrees of excellence; and if there is a degree of excellence in all the lands and climes which are covered by the British Empire over which, as our friend has just told us, the sun never sets, it seems to me there is a land which excels every other. So we think at all events, we Canadian people, that we are by far the best part of the British Empire. (Applause).

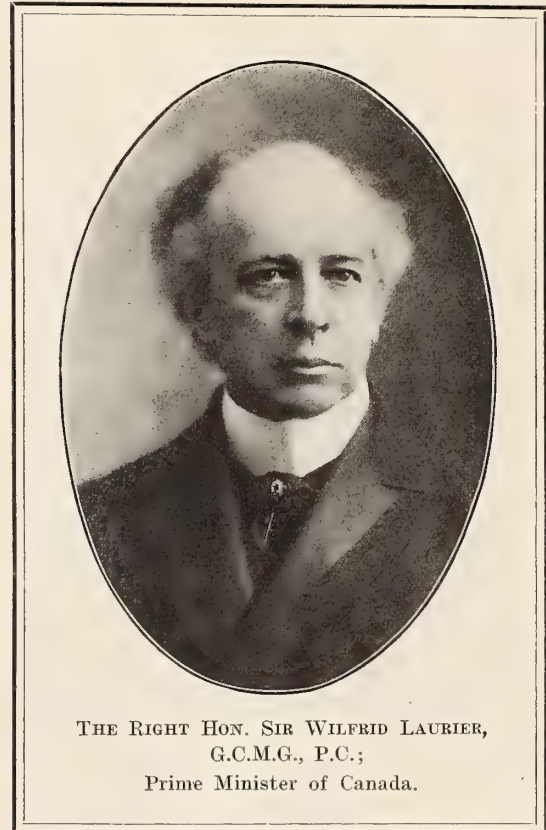
The Garden of Canada.

But even in Canada itself, this land so beautifully illustrated by Mr. Lemieux, there are degrees of excellence, it is not at all equally the same. Once upon a time, and many years ago I am sorry to say, I thought that the valley of the river Achigan, where I was born, and the valley of the river Assumption, where I was educated, could not be surpassed. It seemed to me these two valleys with their running brooks, hills and dales, their fertile farms and their happy and contented people, must be the paradise on earth. Later on, as I advanced in life, as I came to know the valleys of the river Richelieu, the Yamaska, the St. Francis, and the two shores of Lake St. Peter, I thought after all there must be in Canada more paradises than one; and as I again advanced in life, as I came to know the Province of Ontario—because as a politician for many years I have been travelling up and down the Province of Ontario—not always with as much success as I would like to have—(laughter)—but never daunted, however, in my efforts—I thought that the Province of Ontario, especially that part of it which commences in the vicinity of Cobourg and extends as far as Sarnia, is as fair a sight as can be found under the canopy of heaven. Later on again I went east with one and the same purpose, and a little better success, and as I came to the valley of the Bay of Fundy, the counties of Cumberland, West-

moreland, Colchester, the dyke lands where there are perpetual meadows, the valley of the Annapolis, where, according to Joseph Howe, you can drive for sixty miles under the apple blossoms, I thought to myself that Ontario and Quebec had not all the glory of the country of Canada.

But, sir, I have just been West, I have been in the two new provinces, Alberta and Saskatchewan, and I must say, gentlemen, I am afraid that we from the East have to take a little off our former pride. We can no longer claim that the garden of Canada is on the bank of the St. Lawrence, or the Bay of Fundy, or on the Great Lakes. If the garden of Canada is to be found anywhere, I say with some regret as a Quebecer, and with intense pride as a Canadian, it is to be found on the prairies of the West.

Nothing can give an idea, nothing can give an adequate idea, of the possibilities of those great provinces, Manitoba, Alberta and Saskatchewan; nothing can give an idea of the possibilities until you have seen them; and even after you have seen them I do not think you still realize, that you can still form a conception of



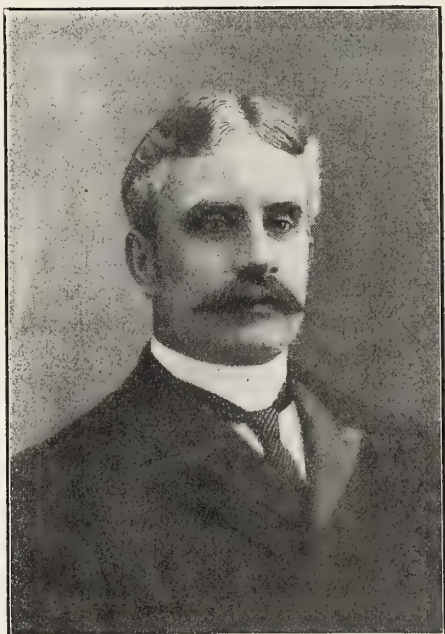
THE RIGHT HON. SIR WILFRID LAURIER,
G.C.M.G., P.C.;
Prime Minister of Canada.

what the future of these countries is. Imagine seven hundred miles at least extending westward from the city of Winnipeg, which some day, as sure as we are standing here, will be every inch of them covered with flowing fields of wheat. The imagination can hardly grasp what the future means for us; and to-day we have just scratched the surface of a few acres and we have a crop of at least one hundred million bushels. What shall it be when we have a population of some ten or twenty millions, all farmers, or tilling the soil? The conception is so great that it is impossible to form an adequate idea of it. But one thing is certain, that there the manufacturers of Canada have a field of wealth for their efforts.

The Scientific Tariff Defined.

This land has not been unknown. We scarcely know it ourselves, but its fame is now rapidly travelling over the world, and from all over the world settlers are coming in. They are coming in by the hundred thousand, the hundred and fifty thousand every year, and I make bold to say that perhaps before two years are over they will come by at least three hundred thousand a year.

Well, gentlemen, these men will be growers of wheat, growers of cereals, for one generation perhaps two or three generations—growers of cereals, an entire industry—and they will require everything that is furnished by the supplies man. They will require clothes, they will require furniture, they will require implements, they will require shoes—and I hope you can furnish them to them in Quebec—they will require everything that man has to be supplied with. It is your ambition, it is my ambition also, that this scientific tariff of ours will make it possible that every shoe that has to be worn in those prairies shall be a Canadian shoe—(applause)—that every yard of cloth that can be marketed there shall be a yard of cloth produced in Canada; and so on and so on. This does not follow that I do not want to trade with other nations, and I still hope that our scientific tariff will not prevent the trade of other nations. I want to give preference to Great Britain—(hear, hear)—but do not hesitate to say that I have no hard feeling against the Americans, and I am willing to borrow a leaf from the book of the Americans. I am willing to sell to them more than they have bought already, and I think we shall manage it also in that direction.



MR. R. L. BORDEN, M.P.

I never thought on my part, and I do not believe, that patriotism should be founded on hatred. I love my country, but that does not prevent me from having an intense love for the country to the south of us. It is true that all nations are not always as friendly as they might be, but as it happens amongst neighbors and even amongst the members of the same family sometimes we have little bickerings. But even if we have those little bickerings we are, as I am proud to say, the best of friends and the best of neighbors. (Applause).

Transportation Problems.

But let me tell you, gentlemen, that if the Canadian manufacturers are to supply the growing West with all the requirements of the West, it is not only a question of tariff, it is as much a question of freight rates and railway facilities. ((Hear, hear). The policy of all parties I am sure in this country is to develop these railway facilities; to make the freight rates as light as possible; to equalize them as much as possible. We have done a great deal, I think, in this respect. We have still more to do in the same line, and all our efforts should be directed to the decrease of the rates so as to make trade more easy to flow from the east

to the west and from the west to the east. This is the programme which is before us to-day, gentlemen; this is the programme before us in which we are all engaged; and this is the programme in which I am glad to say the Canadian manufacturers are engaged at this moment. If there is in any quarter of this Canada any feeling against the manufacturers I do not share that feeling. The manufacturers I dare say are human like every one of us, and if they stand for No. 1 I shall find no fault. I want everybody else to stand for No. 1; the farmers to look after their own interests, the manufacturers, the merchants and all classes to look after theirs; and they say that it is the only way we can make up this nation in which we have so much hope and so much confidence.

Mr. Lemieux has spoken eloquently and well of the relations which now characterize the Canadian people and the Motherland. I think we can claim with some pride that Canada has been the pioneer in that direction—(hear, hear)—and it is to Canada it is due that England has been able to model a colonial policy which has been a departure from the old system, and which has made it possible that we can have to-day under the British Crown no longer colonies but nations. In this I say the prime feature is due to the efforts of Canada; and gentlemen, upon this also our task is not yet finished. We shall have a great deal to do, and I trust that ourselves and our descendants, like our fathers before us, upon every occasion shall rise up to our duty, whatever it may be. (Applause).

THE PRESIDENT:—Gentlemen, we are greatly honored this evening by having with us the leader of His Majesty's Loyal Opposition, Mr. R. L. Borden. (Applause). I take very much pleasure in asking Mr. Borden to propose the toast "The Industries of Canada."

MR. R. L. BORDEN, who was received with cheers, spoke as follows: Mr. President, Your Honors and Gentlemen, I esteem it not only a very great privilege but a very great honor to be here to-night and to be called upon to propose this toast. Unfortunately last year when your banquet was held I was unable to be present, owing to certain missionary endeavors which I was making at the time, and I don't know but I might say with regard to them that they failed to meet with that success that they deserved, and in that respect they were like some of the efforts which Sir Wilfrid Laurier has spoken of to-night. However, time brings about its rewards in this case at least, because I am here to-night.

And let me in the first place congratulate not only you, sir, but the Association as well, upon your election to the high office of President of this Association, a position of very great responsibility, a position which is of importance not only to the members of the Association and the manufacturers of Canada themselves, but also to the whole country as well.

I was very much impressed with one portion especially of your very able address to-night, and that was where you spoke of the good that is being done in Canada to-day simply by the fact that men from all parts of the country are being brought together in the meetings of this Association, and in that way the people of the country, the manufacturers of the country, are learning to know each other a little better. I remember that in the days of old there was a proverb, the wisdom of which was such that it was said to be descended from heaven, "Know thyself;" and in a country like Canada another proverb might be made which is of almost equal importance, and that is, "Know thy neighbor as well." This has been a little hobby of mine since I have got into public life and since I have had to deal with and to know the diverse elements of our population and our country, and I say again that if the manufacturers of Canada could see no other good in the work of this Association they might at least see a very great good, that was pointed out so well by your President to-night, the good of making the people of this country of all parts, of all races, of all creeds better acquainted with each other than they otherwise would be.

Before referring to the nature of the toast, I would like to say just one or two words about the matter of the tariff which has

been referred to by my friend Mr. Lemieux, in that very eloquent speech of his to-night. Speeches of that kind from him we are accustomed to; we hear him often in the House, and I say with Sir Wilfrid Laurier that the speech that he has given you to-night—a speech of splendid eloquence—is no more than we are accustomed to from that gentleman day by day in the House of Commons. My friend Mr. Lemieux seems to have a little better understanding, if he will permit me to say so, of the meaning of the word “adequate” than some of the gentlemen who sit with him formerly manifested. I can remember very well indeed when I was fortunate or unfortunate enough, as the case may be, to introduce that word into a certain resolution I moved in the House of Commons, that the gentlemen whose countenances confronted me from the Treasury benches, and their supporters as well, professed a very doubtful knowledge of what the meaning of that word might be. Now I think it is a good omen for the people of the country, from my standpoint at least, that my friend Mr. Lemieux and Sir Wilfrid Laurier as well used the word several times to-night. It is evident that their education is progressing a little, and I trust this gives us an indication that we can after the next session of Parliament have that scientific tariff of the present rendered even a little more scientific than it has been in the past eight or ten years.

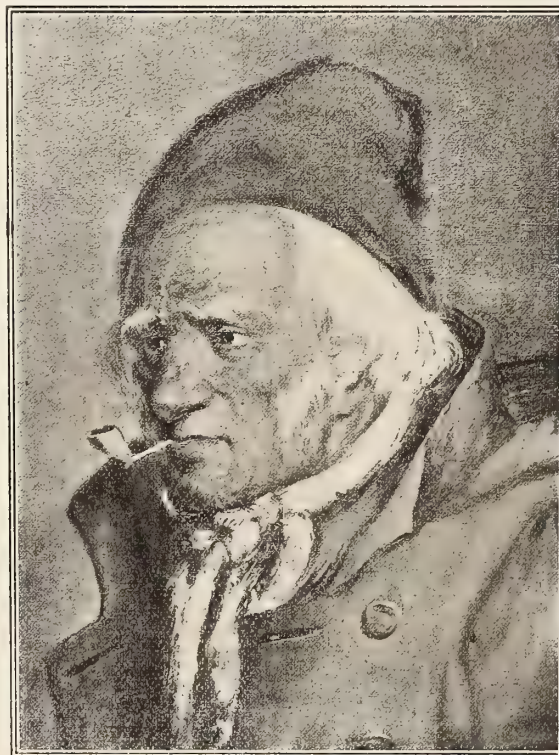
Of course you know a word means just what impression it conveys to the mind of the auditor. I am reminded by this of a little of a story which must be a true story, because I heard it told by a clergyman at a public dinner in the Maritime Provinces. He was telling the story of a young man who became engaged to a young lady—I believe such occurrences are not uncommon in this country as well as in other countries—and after being engaged for about a week he seemed to be rather thoughtful and perturbed, and finally he told the young lady he had a confession to make which should have been made before. She became interested and a little thoughtful, and he said, “I should have told you about this. I make the confession now. I trust it will make no difference between us, but to tell you the truth I must admit that I am a somnambulist.” The young lady was very much disturbed apparently. She also became thoughtful, and she said: “I think you should have told me before. However, I am too fond of you to let that make any difference between us. As you know, I am a Methodist, but I am willing to go with you once a Sunday.” (Laughter). Of course I do not know exactly what meaning the word “adequate” may have conveyed to certain of my friends in the House of Commons. I am, however, practically satisfied to-night that at least it bore to their minds the meaning that occurred to us who were content to use it in the days gone by and indeed up to the present time.

The Industries of Canada.

Now the toast which I have the honor to propose is a toast of a very comprehensive nature, the toast of “The Industries of Canada.” It is not the manufactures of Canada, it is the industries of Canada of all kinds. It includes not only the work of the factories. It includes agriculture, mining, fisheries, and the work of those engaged in exploring our forests. I might perhaps be permitted even in an after dinner speech to read to you one or two figures which I have compiled from the official records of the Government and, like the words of the clergyman, you know they must be correct as to what the total product of the industries of Canada is at the present time and what our progress has been. I find that in this year of grace 1905, the products of Canada for the first time have passed the billion mark. They are about eleven hundred million dollars, and of that, as I gather from the official records, together with the statement of your retiring President, there has been produced in the factories of Canada about six hundred and fifty millions. The capital invested is five hundred millions. You pay annually in wages one hundred million dollars, and you employ in these factories of Canada no less than three hundred and fifty thousand workpeople.

This gives us some room for reflection. It points out to us that there has been a marvellous development in this country, and

especially a marvellous development in the industrial life of Canada as indicated by the products of the factories. Just a moment to add to that thought what the conditions are with regard to our imports. I make no comments upon these; I only leave them for your consideration and for the consideration of those who are engaged in the work of making a new tariff. The tariff for the time being is, as it were, *sub judice*, the Government of the country being engaged in the all-important work of ascertaining what the needs and requirements of the country are. So far as I am concerned, I am prepared to say that when the work of the Government, founded upon the researches of that Commission, is announced to Parliament, it will receive careful, respectful and attentive consideration from those who sit to the left of the Speaker. But in the meantime just let us consider the situation a little. Our imports amount in 1905 to \$267,000,000; they exceed our exports by no less than \$63,000,000. I am giving the figures in round numbers and giving the even millions in each case. Of this we import from the United States \$166,000,000, to which country we export \$75,000,000; and of this if we adopt the results which were found from the bullion returns of last



A HABITANT.

(From the Painting by Kreighoff.)

year, about \$20,000,000 would be composed of silver concentrates, gold dust and other articles which are practically the same as bullion. We import more manufactured goods than we export in Canada; forty per cent. of our imports are manufactured goods; twenty per cent. are goods partly manufactured, that is, goods which come in for the purpose of our manufactures, or goods which come in in order that the manufacture may be completed in this country; fourteen per cent. of our imports are articles of food, and twenty-one per cent. are what are called crude articles or raw material. In the United States seventeen per cent. only of their imports are manufactured goods; fourteen per cent. are goods partly manufactured, and twenty-four per cent. are articles of food, and thirty-one per cent. are raw material or crude articles as they are so termed.

The Home Market.

Now, if there is one thought I would like to give to you gentlemen in regard to the industries of Canada it is this, I would like to emphasize the interdependence of the industries of Canada one upon another. I do not want to take up very much time, but

I might illustrate what I mean just in one way. The farmers of Canada near the industrial centres find their farms increase in value and their products commanding a better price, when they have near them some centre of population created by the great manufacturing industries. There is no doubt about that. I found among American farmers who came into the North-West, when I visited that country three years ago, one difficulty existed in their minds as to their future markets, and that was this: that they had not in their immediate vicinity those great centres of population which have sprung up in the Western States. So far as you gentlemen are concerned, are you not equally interested in having a tariff in this country which will develop the interests of the country along all lines? In this great North-West of Canada at the present time, we have, as Sir Wilfrid Laurier has eloquently pointed out, a great influx of population. That is the home market of this country, that is the best



HON. CHAS. FITZPATRICK, K.C., M.P.,
Minister of Justice.

market for the industries of this country, that is the best market for the manufactures of this country. I do not know what proportion of our manufactured goods we export, but I suppose at least nine-tenths of the goods manufactured in Canada find their market in this country. In the United States the proportion is even greater, because I have thirteen thousand million of manufactured goods produced in the United States in 1901, and all but three and a half per cent. find their market in the United States of America. So therefore there is an interdependence of interests in regard to all the producing industries of Canada.

I have been very much struck in going through this Province and the Province of Ontario with the great advantage to the surrounding country of the manufacturing industries in both Provinces; and I might say one thing more in regard to that. In two towns, existing perhaps within thirty miles of each other, I have found one with busy hives of industry and another with no industries at all; and in tracing back the causes of the difference in the two towns I have generally found that it resulted from

men of enterprise and some capital having undertaken industries in a small way and made them successful, thus inviting other capital, so that one town in the course of twenty, twenty-five or thirty years became a considerable manufacturing town, while the other was absolutely at a standstill.

This gives to you an indication of what manufactures mean. I very much regret in my own little Province of Nova Scotia, whose resources are as important and perhaps more varied than those of any other of equal area in Canada, the manufacturing industry has not up to the present been pursued as it might have been. I except of course the great industries of Sydney. But in the ordinary towns of Nova Scotia we have not, I venture to believe, made that progress which has been made in the towns of Ontario and Quebec.

Now I have detained you a little longer than I intended. Just one word in conclusion. I agree with what my friend Mr. Lemieux has said as to the relations which ought to exist, and I am happy to say do exist between the two great races in this country. It is fitting that the meeting of this Association should be in this old historic city of Quebec, upon whose walls and upon whose battlements are enshrined so many splendid memories of the past, so many lofty traditions; on the tablets of whose history are engraven the names of so many illustrious men who have now passed away. I think if for those men of the past the curtain which separates the years that are from the years that are to be could have been lifted, if for those races that warred for the northern half of this continent in the days gone by, some seer among them could have lifted the curtain and they could have seen this country as it stands to-day, a vision would have been presented which hardly could have been believed in or realized. Wolfe and Montcalm fell on the Plains of Abraham, and it seemed as if the blood that was then shed cemented forever the union which is so happily expressed in the monument which has been erected to the memory of both.

We see here to-day in Canada captains of industry whether of British or French descent, met in this old historic city. We see two great races employed side by side in developing the great work of the splendid heritage which belongs to the people of this country. And although there may be some little misunderstandings, some little petty jealousies now and then, let us remember that these are no more than occur between men of English descent in their own affairs, or I suppose among men of French descent with regard to their own affairs. The whole relations of the races in Canada are what they ought to be, and I trust and believe that they will continue to improve, if improvement be possible.

Let me in conclusion, Mr. President, ask you to charge your glasses and drink to the great industries of Canada, and although the development of those industries has been great in the past, I am sure it is the fervent wish and aspiration of every one of us that in the years to come the development and the prosperity of those industries will be greater than even now we can imagine. I therefore ask you to charge your glasses and drink to the industries of Canada. (Applause and cheers).

THE PRESIDENT:—Gentlemen, it affords me very much pleasure to call on the Honorable Charles Fitzpatrick, the Minister of Justice, to respond to the toast, "The Industries of Canada." (Applause).

THE HON. MR. FITZPATRICK:—Mr. Chairman, Your Honors and Gentlemen: Once upon a time there was a fellow-countryman of mine who had something of a reputation as an orator, and one evening he had been specially eloquent—of course after dinner—and he was asked how it came to pass that he had such a magnificent flow of eloquence. His answer was very simple. Said he: "To explain why, my father was an Irishman and my mother was a woman."

Now, let me ask you to apply that to my friend the Solicitor-General, and tell me what his father must have been and how many mothers he must have had. (Laughter).

It is a task indeed for me to follow my junior to-night and to follow my friend the leader of the Opposition, but perhaps at

the outset you will allow me to say as "one to the manor born," that we bid you welcome to this ancient city, forever inseparably associated as it is with all the romance and all the history and no small part of the industrial development of this Dominion. (Hear, hear). Gentlemen, many of your members have wandered through this city during the last few days, and have smiled perhaps in contempt upon these long winding streets that you see about you; but have you realized that through those streets passed in the long ago that great procession of priests, of warriors and of traders who penetrated to the very heart of this continent and laid broad and deep the foundations of this great Canadian people? (Applause). Have you not as you wandered through our streets, and at times in the evening as you stood upon our terrace, heard the very winds that beat against this promontory moan to memories of the deeds of heroism performed in what are now, thank God, the half forgotten conflicts of the past? Have you not realized that within a stone's throw of the place where you now sit the last great conflict between English and French was fought and that upon the Plains of Abraham were buried deep the seeds of discord and dissension, and that within these walls French and English live in peace and harmony? Why? Because they respect not only the rights and privileges of one another, but respect even the prejudices of one another; and living as we do our sole hope, our sole ambition is to work out our own destiny under the protection of the one free flag of the world. (Applause).

As I listened to my eloquent friend the Solicitor-General to-night, it seemed to me that from his speech a lesson to us all must flow. We who speak English cannot pretend to be so eloquent as our French-speaking friends; but is it not a lesson to you all, a lesson to us all, to realize that one of these French-Canadians can come into our midst and speak our own language as he has done? Is it not a lesson to us to understand that that race which one hundred years ago was abandoned on the shores of the great St. Lawrence River scarce sixty thousand strong have grown to such a position in this country that they produce such men? (Applause). It is not necessary for me to adorn the tale. Let us each take the lesson home with us and understand that in those men we have allies who can help us to develop this country that their forefathers settled. (Applause).

I am sure that a great many among you are now putting to yourselves this question, what has all this to do with the industries of Canada? Well, it hasn't got very much, I admit, but perhaps after all in the development of the industries, historical tradition and historical association count for something.

Our Resources and their Development.

Gentlemen, industries it seems to me were designed for the purpose of developing natural resources. Now, what are the resources of Canada? It is idle for any man, except he were the Solicitor-General, to attempt to describe or rather to give any adequate description of it. But go with me for a moment down to the Atlantic seaboard, and there we find conditions existing which in this age of steel and of iron have given to Great Britain her undoubted commercial supremacy. That is to say, we find lying practically beneath the same fields the iron ore and the coal with which to work it. Come with me to the slopes of the Pacific, and there we find riches beyond the dreams of avarice which merely await the coming of labor to woo them from the bosom of our rocks. Then go with Sir Wilfrid Laurier to Alberta and Saskatchewan, and there you will find fields, as I have said once or twice before, where men measure their plow furrows by the mile and when they have reached the end they look out over a sea of golden grain extending even to the horizon. And then we come back to the Province of Ontario and in the Niagara Peninsula we find a country which will produce everything that can be produced in any country in the world.

Now these to a limited extent briefly and imperfectly describe our resources. We have to develop them. Stewart Morrison, I think it was, who, in his marvellous epic on British industry, said that the glowing bars of her furnaces were the foundations of

England's greatness. That undoubtedly was true of the past, even of the very recent past; but to-day are we not in the presence of another force, in the presence of another power, in the presence of another energy which has helped largely to supersede steam? Are we not in the presence of a mechanical force the possibilities of which far surpass, or may far surpass, even the dreams of him who wrote the tales of "Arabian Nights?" I refer to electricity. Look over these Laurentian hills, a thousand, yea, a thousand streams now beat and foam their way, wasting their energy, towards the ocean, which streams await the coming of man that some day will harness their energy and tie it up so as to set in motion a thousand busy industries in every corner of this land. And tell me what is to be the future of Canadian industries when we have carried to its full perfection this question of the development of electricity? Why, look at it. You can practically command into your possession the passing clouds and use the everlasting hills. The result is they toil on in your service even while you sleep. You do not dig nor do you delve, you



Hon. J. C. McCORKILL,
Treasurer, Province of Quebec.

simply allow nature to take its course, and when that day is reached what is to be the development of our Canadian industry?

Now, I shall not attempt to keep you any longer, for I am sure you are anxious to know all about the tariff you intend to make. I shall not discuss adequate protection with my friend the leader of the Opposition. I might say what Sir Wilfrid Laurier is going to do with the marvellous tariff, but I won't let you into the secret. There are many of you here who are my electors. I endeavored in every conceivable way to be put on that Tariff Commission. I wanted to get on. I thought I might try my skill as a draughtsman—my 'prentice hand, as the leader of the Opposition says—on that tariff, but I wouldn't be let on. You know why, gentlemen. I am a brother manufacturer. (Applause). The great majority of you are not aware of that fact, but I am. I always live on the farmer. He feeds the whole of us, but we live on him. I manufacture binder twine. I run the Kingston Penitentiary. You know I have a little twine factory there, and because of my connection with the twine factory the Prime Minister would not let me on this Board. It is all very well,

Mr. Chairman and gentlemen, he kept me off, but the time will come when this tariff will come around to the Department of Justice and when the draughtsman will get his work in, and then look out. (Applause).

The President called on Mr. Duquette, who responded with another song.

THE PRESIDENT:—I now have very much pleasure in calling upon Mr. H. Cockshutt, of Brantford, our First Vice-President, to propose the toast, "The Province and City of Quebec."

The Province and City of Quebec.

MR. COCKSHUTT:—Mr. President, Your Honor, Sir Wilfrid Laurier, Ladies and Gentlemen: It is not my intention to make any speech to you this evening. We as members of this Association are here in the Province of Quebec and in the old historic city of Quebec. I think that we have appreciated, during the few days that we have been here, the picturesqueness, the artistic beauty, and I might also add the history that is connected with this ancient city, and we cannot I think but feel glad that we came, because we have been treated with that princely hospitality that only Quebec knows how to give. (Applause). We were here, a great number of us, three years ago, on the way to Halifax, and we were treated at that time in a most princely manner, but I think, Mr. President, that I can safely say that our treatment this time even excels the treatment which we received before.

I am not, as I told you, prepared to make a speech; in fact I could not if I would, and I would not if I could, but I am going to ask you to charge your glasses and drink the toast to the Province of Quebec and the City of Quebec.

The toast was given, followed by the singing of "For they are jolly good fellows" and cheers.

THE PRESIDENT:—Gentlemen, I now have much pleasure in calling upon the Hon. J. C. McCorkill.

HON. MR. MCCORKILL:—Mr. President, Ladies and Gentlemen: I assure you I appreciate more heartily, probably, than any of the guests this evening the invitation of this Association to this magnificent banquet, and allow me to add my congratulations to the President of the Society, who is a Quebec man—if not of the city of Quebec, at least of the Province of Quebec—upon his election as President of this Association. I feel sure from what I have heard of him and what I have read of him and what I know of him that he will be a worthy successor to the very popular presidents whom you have had in the past.

Allow me to add my word of welcome to those that have already been spoken to you, the members of this Association, who come from sister provinces to this grand old city of Quebec. I am not a native of the city of Quebec, but I have had sufficient experience in it, I have lived in it sufficiently, to know something of the hospitality which always exists here and which is always extended to the outsider. It has been properly said by one of the speakers that there is no spot in Canada where a warmer or heartier welcome is given to those who visit within its walls. (Applause).

Now I am asked to respond for the Province of Quebec, but you have heard nothing else but responses for the Province of Quebec this evening. We started out with the opening address of the President and he had a good deal to say about the Province of Quebec. The Solicitor-General gave you something of its history, a great deal of its history. Sir Wilfrid Laurier followed and gave you something of its history and something of its prosperity. What remains for me, a representative and member of the Government of the Province of Quebec to add to what has already been said?

Commercial Travellers' Tax.

At this hour of the evening I am not going to pretend to go over the same ground which has been gone over by the preceding speakers. There was really only one question which seems to

have been given a wide berth by the previous speakers, and that is the Non-Resident Commercial Tax. I presume that this was left to the author of the tax to make reference to. I assure you, gentlemen, that I came here with a great deal of trepidation. I heard this evening that a very fierce resolution was passed at a meeting of your Association this afternoon, which is only a repetition of several similar resolutions which have been passed by various societies, not only in Canada but in the mother country, and I understand even in the United States. I am not going to enter into a long discussion of this tax, but I would say this to the members of your Association, I ask of you to send a deputation to me to talk this matter over, the same as has been done by representatives of other persons who have been affected by the taxes which have been passed by our Province. (Hear, hear).

You know that we have a certain amount of expenditure, a considerable amount of expenditure in the Province of Quebec, in order to keep up our end of this great confederation, and in order to meet these expenditures we must have revenue. We have confidently counted upon the Dominion of Canada to assist us in this respect. We have had conventions in this good old historic city of Quebec from time to time, and the Dominion Government has been memorialized to assist us out of the difficulties under which we have labored, but thus far nothing has been done in that direction, and it has remained for my predecessors and now for myself to try to find certain resources in addition to those which have already existed.

We have various taxations in this Province of Quebec as they have in other Provinces. We did think that the representative traveller of foreign houses who came into our Province had a preference over the taxpayers of the Province which we ought to equalize. That really was what we were attempting to do, to equalize the position of our own people with that of the foreign merchants and at the same time incidentally to give us a little revenue. It may be that this tax may have affected some of our people in a manner that we did not anticipate; we know it has affected those at whom it was aimed, the same as every tax affects the person and the company which is influenced by the taxation. Our Government of the Province of Quebec consider that this tax was based upon a sound principle. I have had occasion to discuss the principle of the tax with a good many of the leading merchants of this Province of Quebec, and the merchants of the cities of Montreal and Quebec, and I can assure you that with only one or two exceptions they agreed with me that the principle of the tax was all right. The only question which they raised was whether or not the amount of the tax was not too high. Now, I am prepared at any time, and am at the disposition of a deputation of your Society to discuss this question, and if they can convince me that the principle of the tax is bad we will deal with it accordingly. If I can convince them, as I think I can do, that the principle of the tax is good, I believe that we can arrive at a correct basis for the future administration of the tax.

The Lake St. John District.

Now, gentlemen, I am not going to detain you any further. As I said you have had references to the history of the city and the history of our Province. You have been told something about the prosperity of the Province, and it would be simply a repetition which I would give you were I to detain you any longer. I might say this, that I am sure a large portion of the population of our Dominion of Canada are in as great ignorance of the great country which exists to the North of us here some 150 miles as I was yesterday. I had the honor of receiving an invitation from the Quebec and Lake St. John Railway to visit the Lake St. John District. I know that it has cost a large sum of money to develop that Lake St. John District. It cost considerable money to build the railway leading to that district. I always felt until yesterday that there was a large amount of that money wasted; but I can assure you that we have a magnificent country to the North. I stood on the banks of the river some 160 miles north of here yesterday, when the breezes which blew up and down that river were just as warm and just as fresh as those we find in any

part of this great Dominion of Canada. All it requires is encouragement for people to go into that section of the country in order to open it up. I am told that from the Lake St. John District clear to James Bay there is good agricultural land, land which may be handed over to the farmer, the settler, the colonist. As yet it remains uncultivated, but we hope in time we may find resources, even from such taxation as we have imposed and from other sources, that will give us in this Province of Quebec just as great a population to the North of the Laurentian Hills as we have to the South of them. I thank you, gentlemen. (Applause).

THE PRESIDENT:—Gentlemen: Previous speakers this evening have referred in glowing terms to the monuments that are standing in this city and vicinity to our departed heroes, General Wolfe and General Montcalm. But, gentlemen, there exist in this good old city of Quebec monuments that stand to prove not only to the citizens of Quebec but to the Dominion of Canada the work of your worthy mayor, the Honorable Mr. Parent.

It was my privilege some fifteen years ago to come to the city of Quebec for the first time. Since then there has been erected to the memory of your noble mayor the magnificent City Hall which we were permitted to hold our meetings in. The splendid streets of Quebec and the whole city in general will stand as living monuments to the greatest mayor Quebec City has ever had. (Applause). Not only has he done these great deeds for this city of Quebec, but he has also done still nobler deeds for the Province of Quebec. Gentlemen, it gives me great pleasure to introduce to you the Hon. S. N. Parent, the Mayor of Quebec, to respond to the toast. (Applause).

HON. MR. PARENT:—Mr. Chairman, Your Honor and Gentlemen: I was to make a very long speech to-night, but fortunately for me I just received word from the handsome ladies on the other side not to pass midnight; and to keep to my watch, I have only a few more moments. I know by experience in Quebec that the Quebec ladies are in very bad humor when they get their husbands after 12 o'clock. So being called for the last twelve years to protect them, and to be a good ladies' friend, I must obey their orders.

I will not trespass on your good time. I know besides that the train is waiting for you and I do not want to take up your time.

You must allow me, Mr. Ballantyne, to congratulate you on the honor placed upon you to-day as President of the Association, and next, to thank you for the kind words you have been willing to say to me personally.

Now, gentlemen, what shall I say about Quebec? You know just as much as I know about it. You have been here for the last three days, and the only complaint I have got about you is that my police have been sleeping for the last three days. (Laughter). In fact you have been so quiet nothing has been left to be done by them. So it remains for me, gentlemen, to say I only hope that in a couple of years from this, if you have been satisfied with us, that you will come back to see us. As Mayor of the city it was my good lot to welcome you the other day. We fully appreciate the high honor you have done us in using this place for your deliberations, and I hope that you will carry home in remembrance pleasant memories of our old city of Quebec.

Let me thank you, gentlemen, for the heartiness with which you have received the toast of the city of Quebec. (Applause).

The President's Health.

MR. DRUMMOND:—Ladies and Gentlemen, I rise to a very pleasant duty. I am going to ask for a moment that Mr. George will consider himself back in the Presidency of this Association, and I am going to ask you to fill your glasses and to drink to this noble young Canadian whom we have to-day called to the chief executive office of this Association. It is a peculiar honor to Mr. Ballantyne. He sits here to-night practically in the cradle of the Canadian race, on sacred ground, if I may say so, and has before him the greatest audience and the best that ever this great national organization has had the pleasure of drawing together

at an annual banquet—the descendants as we are of the two most powerful nations in the world, but united as Canadians, loyal to the old flags, and lovers of the King. In Mr. Ballantyne we have, as I said before, a strong, young Canadian who in his own business has shown a most progressive spirit. It seems to me that hardly six months pass without some addition to the factories he has under his control. These are the kind of men we want to build up this Canada.

I have not at this late hour anything more to say than to ask you to drink heartily, and I know you will, to the Chairman who has presided so admirably to-night.

The guests joined in singing, "For He's a Jolly Good Fellow."

MR. BALLANTYNE:—Mr. Chairman and Gentlemen, words fail me at this moment to thank you sufficiently, Mr. Drummond, and you, gentlemen, for the hearty manner in which you have responded to this toast. I can assure you all, as I did this afternoon, when you elected me to the high and honored position of President of this great National Association of Canada, that I would endeavor to do my best with the hearty co-operation and assistance of all of our members. It is indeed a great privilege to be President of the Canadian Manufacturers' Association. I feel the responsibility very much indeed. But when I take into consideration the very hearty manner in which you have received the toast to myself this evening, and the fact that you have unanimously elected me to the honored position which I now hold, it makes my duties light, and I hope that at the end of my term I will be able to merit at your hands the same appreciation that you have given to my worthy predecessor in office, Mr. W. K. George. (Applause).

Some people wonder how it is that men busily occupied in business can give any time or attention to affairs such as we have to attend to in the Canadian Manufacturers' Association. I think, gentlemen, besides doing our duty to the firms that we are engaged for, that we owe a duty to the country of our birth. We owe a duty to the Great British Empire. We should not leave it all to the Governments and public men. This Association has striven in the past and this Association will strive to do its duty in the future to help make Canada a great nation. She is a great nation, and we hope to make her a still greater nation.

Gentlemen, I wish to take this occasion publicly on behalf of the members of the Canadian Manufacturers' Association to thank the Hon. S. N. Parent, the Mayor of Quebec, the citizens of Quebec, and the Quebec Branch of our Association, our worthy Chairman, Mr. G. A. Vandry, our Quebec Vice-President, Mr. George E. Amyot, and our worthy Lieutenant-Governor, Sir Louis Jette, for the very kindly and princely manner in which they have entertained us during our three days' visit in this city.

You, Mr. Mayor, have asked us to carry away kindly remembrances of the city of Quebec. I am sure that you need hardly ask us to do that. We will all leave this good city with nothing but the kindest feelings. I can say this much, that our Association has held annual meetings in various cities in Canada, but no city has entertained us so well and so whole-heartedly as you and the good citizens of Quebec. (Applause).

I will not take up any more of your time at this late hour, but will ask you to close this magnificent banquet by the national anthem.

The guests rose and after singing "God Save the King," first in English and then in French, the banquet closed at 12.10 o'clock a.m.

SITUATION WANTED.

An energetic, ambitious man of 25 years of age desires a responsible position in sales or purchasing department of strong Canadian manufacturing company—machinery or metal trades preferred. Five years' experience in responsible positions with large manufacturers of Canada and United States. First-class references. Communicate with Canadian Manufacturers' Association.

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 J. J. McGill, Merchants' Bank Building, Montreal.
 Dr. Ed. Morin, Dr. Ed. Morin & Co., Quebec.
 F. B. Polson, The Polson Iron Works, Toronto.
 W. B. Tindall, The Parry Sound Lumber Co., Toronto.
 F. H. Whitton, The Ontario Tack Co., Hamilton.
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 John Northway, John Northway & Son.
 A. S. Rogers, The Queen City Oil Co.
 Frank A. Rolph, Rolph & Clark.

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 J. J. McGill.
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 Robt. Munro, The Canada Paint Co.
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 G. W. Sadler, Sadler & Haworth.
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 F. W. Jones, Columbia River Lumber Co. Golden.
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 D. R. Ker, The Brackman Ker Milling Co., Victoria.
 W. J. Brodie, British Columbia Canning Co., Victoria.
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 Wm. H. Barker, British Columbia Packers' Association, Vancouver.
 Geo. A. Walkem, Vancouver Engineering Works, Vancouver.
 Jno. Hendry, British Columbia Mills, Timber & Trading Co., Vancouver.
 E. H. Heaps, E. H. Heaps & Co., Vancouver.
 J. F. Gibson, Pacific Coast Lumber Co., Vancouver.

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VICE-CHAIRMAN.

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SECRETARY.

M. McF. Hall, Secretary Exhibition Association, Halifax.

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 Jas. Eastwood, New Glasgow.
 J. P. Edwards, Londonderry Iron Works, Londonderry.
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 F. J. Fraser, Davis & Fraser, Halifax.
 Graham Fraser, Dominion Iron & Steel Co., Sydney.
 H. H. Hamilton, H. H. Hamilton & Sons, Pictou.
 J. R. Henderson, Henderson & Potts, Halifax.
 H. L. Hewson, Hewson Woollen Mills, Amherst.
 Wm. Levis, Robt. Taylor Co., Halifax.
 A. F. Pelton, Rhodes, Curry & Co., Amherst.
 F. C. Simson, Simson Bros., Ltd., Halifax.
 N. B. Smith, Smith & Proctor, Halifax.
 I. C. Stewart, Imperial Publishing Co., Halifax.
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G. A. Vandry, J. Arthur Paquet.

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Jos. Picard, The Rock City Tobacco Co.

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 Major T. Hethrington, Thos. Hethrington, Quebec.
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MANITOBA**CHAIRMAN.**

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VICE-CHAIRMAN.

T. R. Deacon, The Manitoba Iron Works, Winnipeg.

SECRETARY.

W. J. Bulman, Messrs. Bulman Bros., Winnipeg.

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 J. Wildman, The Kemp Metal & Mfg. Co., Winnipeg.
 Wm. Martin, The Manitoba Gypsum Co., Winnipeg.
 W. J. Hammond, W. J. Hammond, Winnipeg.
 J. McKechnie, The Vulcan Iron Works, Winnipeg.
 Thos. Blackwood, Blackwoods, Limited, Winnipeg.
 G. F. Stephens, G. F. Stephens & Co., Winnipeg.
 R. W. Patterson, Winnipeg Paint & Glass Co., Winnipeg.
 M. J. Armington, The Hague Armington Co., Winnipeg.

Constitution and By-Laws of the Canadian Manufacturers' Association.

CONSTITUTION.

The Constitution of the Association is contained in the following Act of Incorporation which was passed by the Senate and the House of Commons of Canada, 1902:

ACT OF INCORPORATION.

Whereas the persons hereinafter named have, by their petition, represented that they and others have for some time past been associated together under the name of The Canadian Manufacturers' Association, and have prayed that it be enacted as hereinafter set forth, and it is expedient to grant the prayer of the said petition: Therefore His Majesty by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

Incorporation.

1. W. K. George, J. J. McGill, Geo. Booth, A. Campbell, C. R. H. Warnock, H. Cockshutt, James Goldie, W. C. Breckenridge, T. H. Smallman, J. B. Henderson, J. O. Thorn, S. M. Wickett, Wm. Stone, J. H. Housser, R. J. Christie, Geo. H. Hees, J. R. Shaw, John M. Taylor, Thos. Roden, J. P. Murray, A. W. Thomas, E. G. Gooderham, P. H. Burton, Frederic Nicholls, C. N. Candee, R. Millichamp, E. C. Boeckh, R. Y. Ellis, Frank Paul, the Hon. J. D. Rolland, W. W. Watson, A. E. Ogilvie, Wm. McMaster, Jas. Davidson, C. C. Ballantyne, G. W. Sadler, P. W. Ellis, J. F. Ellis, A. E. Kemp, W. K. McNaught, Edward Gurney and such others as are now members of the Association mentioned in the preamble, together with such others as hereafter become members of the Association hereby incorporated, are incorporated under the name of "The Canadian Manufacturers' Association," hereinafter called "the Association."

Objects.

2. The objects of the Association shall be to promote Canadian industries and to further the interests of Canadian manufacturers and exporters, and to render such services and assistance to members of the Association and to manufacturers and exporters generally, as the Association shall deem advisable from time to time.

Existing Officers and By-Laws Continued.

3. The members of the Association who, at the time of the passing of this Act, hold office in, or are members of any committee of the unincorporated Association, shall continue to hold the same offices, and to act on the same committees, until the next annual general meeting of the Association; and in like manner the Association shall continue to work under the existing constitution, by-laws and regulations of the unincorporated Association until the next annual meeting of the Association, and from that date the Association shall have such officers and committees having such powers and duties as the Association may, from time to time, by by-law or resolution determine.

Head Office.

4. Until otherwise determined by the Association, the head office of the Association shall be in the city of Toronto, in the Province of Ontario.

By-Laws, Etc.

5. The majority of the members of the Association present at any annual or special meeting called for that purpose may make by-laws, rules and regulations for the government of the Association, including by-laws providing for the admission, sus-

pension, expulsion or retirement of members, and for the imposing of fees, subscriptions and penalties, which shall be binding upon all members of the Association, and on all its officers, servants, and others lawfully under its control.

Powers of Association.

6. The Association may:—

(a) Publish such pamphlets, periodicals or other publications as are deemed advisable in the interests of the Association or any of its members;

(b) Organize, establish, regulate and dissolve branches or sections of the Association, but no such branch or section shall be deemed to be a separate corporation;

(c) Engage in the work of developing and promoting the export trade of Canadian goods by such means as may be considered desirable by the Association;

(d) Obtain information and statistics for its members, or for Canadian manufacturers and exporters, and render to them such other services or assistance as may be deemed advisable;

(e) Purchase or acquire real property, and mortgage, lease, sell or otherwise alienate the same provided that the value of such property held by the Association at any one time shall not exceed fifty thousand dollars.

Arbitration Powers.

7. (1) The Association may provide by by-law for the appointment of arbitrators, members of the Association, to hear and decide controversies, disputes or misunderstandings relating to any commercial matter which may arise between members of the Association or any person whatsoever claiming by, through or under them, which may be voluntarily submitted for arbitration by the parties in dispute.

(2) Members assenting to an arbitration by an instrument in writing shall be understood to have submitted to the decision of the majority of the arbitrators appointed to hear the case and to decide upon the same.

(3) The arbitrators appointed to hear any case submitted for arbitration as aforesaid may examine upon oath (which oath any one of such arbitrators is hereby empowered to administer) any party or witness who appears before them, and shall give their award thereupon in writing, and their decision or that of a majority of them, given in such award shall be final and binding upon the parties.

Committees of Enquiry.

8. The Association may, by by-law or resolution, provide for the appointment of committees of enquiry to enquire into any matter affecting the manufacturing import or export interests of Canada, and such committees may examine upon oath (which oath any member of said committee is hereby empowered to administer) any party who appears before them, and the evidence so taken may be used to assist the Association in arriving at a decision with reference to the matter under consideration.

Notices of Meetings.

9. All meetings of the Association shall be called by notice mailed to each member at least fifteen days before the holding of such meetings, and all notices of special meetings shall state the objects of such meetings.

BY-LAWS.

MEMBERSHIP.

There shall be three classes of members, Active, Honorary and Correspondent. Active members shall consist of ordinary and life members.

Active Members.

Active membership in the Association shall be open to individuals, firms and corporations actively engaged as manufacturers in the Dominion of Canada, and when such individuals, firms and corporations are not engaged exclusively in manufacturing, it shall be the duty of the Reception and Membership Committee of the Association to decide and report to the Executive Council whether the manufacturing interests represented in each case are proportionately large enough to warrant the acceptance of the application.

Individuals, firms and corporations may have more than one representative provided that the individual representatives named after the first are actively engaged with and give the greater portion of their time to the manufacturing industry or industries they represent.

Candidates for active membership shall sign an application. This application shall be forwarded to the Secretary, and shall be acted upon by the Executive Council after report by the Reception and Membership Committee.

Honorary Members.

Honorary members shall be elected only by unanimous vote at the annual general meeting. They shall have the same privileges as active members, but may not vote or hold office.

Correspondent Members.

Correspondent members shall be elected by the unanimous vote of the Executive Council for the term of one year or at the pleasure of the Executive Council. They shall be furnished with credentials as representatives of the Association in British or foreign trade centres and shall have the same privileges as honorary members.

Life Members.

Any ordinary member in good standing may, after at least one year's membership, become a life member on payment in advance of ten annual subscriptions, or may be elected by unanimous vote at the annual general meeting in consideration of services rendered to the Association.

MEETINGS.

The fiscal year of the Association shall commence on the first day of August of each year. The annual general meeting shall be held within the eight weeks succeeding August 1st. It shall be convened in such place as may be decided upon by the Executive Council; to receive the report and financial statement of the Executive Council for the past year; to elect the officers, Executive Council and Committees for the ensuing year, and for all other general or special purposes relating to the management of the Association's affairs.

The annual general meeting and all special meetings of the Association shall be called by the President. The President may call a special meeting of the Association at his own pleasure and shall do so at the written request of ten active members within three days of his receipt of such request.

OFFICERS.

The officers shall consist of a President, a First Vice-President, and an additional Vice-President from each Province represented in the Association, a Treasurer and such other officers as the Executive Council may from time to time see fit to appoint.

Duties of Officers.

President.—It shall be the duty of the President to preside at all meetings of the Association and of the Executive Council, and to enforce compliance with the Constitution and By-laws.

Vice-Presidents.—It shall be the duty of the Vice-Presidents, in the order of their election, to assist the President in the discharge of his duties, and in his absence to officiate in his stead.

Treasurer.—The Treasurer shall receive and pay out all moneys on behalf of the Association and deposit with a chartered bank, to the credit of the Association, all moneys received. He shall, in conjunction with the Secretary, sign all cheques and have them countersigned by the President or one of the Vice-Presidents, or such other person as may be designated by the Executive Council. He shall cause to be kept the accounts of the Association, and have the same prepared, together with a balance sheet thereof, for the inspection and signature of the auditors, and shall, in conjunction with the auditors, prepare and certify the statements for the annual meeting.

Secretary.—The Secretary shall be appointed annually by the Executive Council. He shall carry out the instructions of the Executive Council, and shall keep a true and correct record of all proceedings of the Association, a correct list of the members and their addresses; shall conduct the correspondence of the Association; issue notices to the members of the Association and of the Executive Council, and of the meetings of all the Committees; he shall collect and carefully preserve all books, papers, letters and documents relating to, or of interest to the Association; shall be remunerated for his services at the discretion of the Executive Council.

He shall have the custody of the Seal of the Association and shall keep the books, papers and records of the Association, all of which he shall deliver up when directed to do so by the President or Executive Council, to such person as he or they shall direct, and shall perform all duties which the nature of his office may require, or the Executive Council may order. The books and accounts shall be kept at the head office of the Association, and shall be open to the inspection of any member of the Executive Council during business hours.

COMMITTEES.

The officers shall be ex-officio members of all Committees. All committees shall meet at the call of their Chairman, promulgated through the Secretary.

1. The Executive Council shall be composed of the President, Vice-Presidents, Treasurer, Chairmen of the Standing Committees, Chairmen of the Branches of the Association, Chairmen of the Sections of the Association, and one member for each fifteen members of the Association as determined by the membership on the day of annual meeting.

The Branches of the Association, outside of the city where the head office is located, may be represented at the meetings of the Executive Council by any of the members of their local Executive, the maximum voting power of the several Branches remaining the same as provided in the preceding clause.

All Past Presidents of the Association, while remaining Active Members, shall be ex-officio members of the Executive Council.

2. The Tariff Committee, the Railway and Transportation Committee, the Parliamentary Committee, the Reception and Membership Committee and the Commercial Intelligence Committee shall each consist of ten active members with power to add to their numbers.

3. The Committee on INDUSTRIAL CANADA shall consist of five active members with power to add to their number.

4. The Insurance Committee shall consist of twenty-one active members, seven to be elected each year and to hold office for three years.

5. The Chairmen of the various standing committees shall be constituted each year for the special work of the Annual Meeting, a Committee on Resolutions and Nominations.

6. A special Committee on Finance, consisting of the President, the First Vice-President, the Provincial Vice-Presidents, the

Treasurer and three others, shall be named at the first meeting of the Executive Council held after the annual general meeting. No expense or liability shall be incurred in the name of the Association without the consent of this Committee.

Duties of Committees.

All Committees shall keep a correct minute book of their proceedings and report to the Executive Council after each meeting.

Executive.—The Executive Council shall be the official Committee of the Association. It shall receive and pass upon reports of all committees, advise and instruct the general officers and shall, in all matters, act as the representative of the Association when the latter is not in session.

Tariff.—The duty of the Tariff Committee shall be to hear, consider and act upon all applications from manufacturers who may desire the assistance of the Association where concerted action may be deemed necessary in behalf of any particular industry, or of the manufacturing interests of the whole country.

They shall be alive to any changes in the Canadian tariff and watch the interests of Canadian manufacturers and exporters.

Railway and Transportation.—The duty of the Railway and Transportation Committee shall be to endeavor to bring about an equitable rate of freights on the Canadian railways, and may be appealed to by any member of the Association who wishes to have a grievance redressed.

They shall give attention to all matters affecting transportation and communication which may, from time to time, become of importance to the trade and commerce of Canada.

Parliamentary.—The duty of the Parliamentary Committee shall be to give attention to all legislation affecting the interests of Canadian manufacturers.

Reception and Membership.—It shall be the duty of the Reception and Membership Committee to look after the reception and entertainment of distinguished guests. They shall arrange for special entertainments, lectures and banquets from time to time as they may think necessary in the interests of the Association.

This Committee shall have power to devise means for securing new members, and shall recommend to the Executive Council for acceptance such applications for membership as they believe desirable.

They shall endeavor also to form branches of the Association in the large trade centres of the Dominion.

Commercial Intelligence.—This Committee shall have power to deal with such questions as the metrical system, moneys, weights and measures; technical and industrial schools and schools of applied art; a national museum of manufactures and fine arts; expositions held in Great Britain and foreign countries, and all information that will be beneficial to Canadian exporters.

This Committee shall establish a bureau of information to which members may apply at any time in order to procure reliable statistics as to imports, exports, the possibilities for extending trade, foreign contracts, tariff regulations, banking systems, etc.

They shall also recommend to the Executive Council for appointment the Correspondent Members of the Association.

Industrial Canada.—This Committee shall deal with all questions relating to the editorial and business management of *INDUSTRIAL CANADA*, the official publication of the Association. Questions of general policy shall be referred to and passed upon by the Executive Council of the Association.

Insurance Committee.—The duty of the Insurance Committee shall be to supply expert advice and assistance in the placing of insurance, in the regulation of insurance practices, and in the protection of the members' interests in respect thereto.

They shall, subject to the authorization of the Council, arrange for a systematic and regular inspection of the premises of members, suggest improvements in risks, and cause to be obtained the benefit thereof in reduced insurance rates.

They shall adjust losses by fire when called upon to do so.

NOMINATION AND ELECTION OF OFFICERS AND COMMITTEES.

Nominations of the Officers and Committees of the Association shall be sent to the Secretary of the Association not less than two weeks before the Annual General Meeting, but no member shall be nominated unless his consent has been obtained.

The Officers, Chairmen of Committees and Committees shall be elected by a majority of the Active Members present at the Annual Meeting. This provision shall not apply in the case of the Chairman of the Insurance Committee, who shall be elected by that committee at the first meeting held after the annual general meeting.

Wherever there is a provincial Branch of the Association established, it shall be asked to nominate its Vice-President to the Association, and its representatives on the Executive Council. Wherever local Branches are formed these shall have the privilege of officially nominating representatives to the Executive Council, the number of such nominations being one for each fifteen members of the Branch.

Should the Chairman of a Trade Section already occupy a place on the Executive Council, the Section shall nominate another representative.

Representatives to local Technical School and other Boards shall be elected by the local branches of the Association in which such Board is situated.

Local branches will be asked to officially nominate the representatives to which they may be entitled on any of the various Exhibition Associations within the locality in which the Branch is organized.

BRANCHES OF THE ASSOCIATION.

The Association may establish local or provincial branches in different manufacturing centres in Canada, on application by the members of the Association situated in such district or province. Such a branch shall consist of at least eight members of the Association, and shall be known as the _____ Branch of the Canadian Manufacturers' Association. The membership shall consist of those members of the Association situated within the locality designated by the Branch. The officers of such Branch to be a Chairman, Vice-Chairman, Secretary and Executive Committee. The officers and the committee shall be elected by the members of the Branch assembled in annual meeting at least three weeks prior to the annual meeting of the Association.

Branch Associations may deal finally with all matters of purely local interest.

They may also pass upon matters of general interest, and the result of their deliberations should be forwarded immediately to the Executive in the form of a recommendation to be considered by it or the whole Association.

The Secretary of a Branch shall be an honorary officer. If a salaried officer is necessary, he shall be employed by the Executive Council, and receive his remuneration from the Head Office.

Ten per cent. of the fees of a Branch can be drawn upon annually by such Branch for local expenses without special application to the Executive Council. If any further amount is required, special application must be made to the Executive Council and be passed upon by it.

No Branch of the Association shall incur any liability in the name of the Association beyond the ten per cent. mentioned in the foregoing clause, and a report of the finances of each Branch shall be presented to the Executive Council at the meeting previous to the close of each fiscal year.

TRADE SECTIONS.

The Association may from time to time establish trade sections to be composed of those members of the Association engaged in any particular industry or trade. Such organization shall be known as the ———— Section of the Canadian Manufacturers' Association.

The membership of such section shall consist of the members of the Association engaged in the particular trade, who apply for membership in the section. The officers shall consist of a Chairman, Vice-Chairman, Secretary and an Executive Committee.

The officers of the Committee shall be elected annually by the members of the section prior to the election of officers in the annual meeting of the Association.

Sections of the Association may deal finally with all matters affecting only their own industry or trade. They may also pass upon matters of general interest and the result of their deliberations should be forwarded immediately to the Executive Council in the form of a recommendation to be considered by it or by the whole Association.

Ten per cent. of the fees of members of the section may be drawn upon annually by such section for any expenses connected with its own business without special application to the Association. If any further amount is required, special application must be made to the Executive and be passed upon.

VISITORS.

Visitors of note may be introduced by any member of the Association, and have all the privileges of the Association rooms.

AUDIT.

An Auditor or Auditors shall be appointed every year by the members at the annual meeting, whose duty it shall be to audit and examine the books, vouchers and accounts of the Association, and to certify to the correctness of the balance sheet, for submission to the Executive Council as soon after the close of the financial year as possible. His remuneration shall be fixed by the Executive Committee upon the recommendation of the Finance Committee.

ORDER OF BUSINESS.

The order of business at the annual general meeting and at all other meetings of the Association shall be as follows:—

1. Reading of minutes of previous meeting.
2. Business arising out of minutes.
3. Receiving communications.
4. President's address.
5. Secretary's report.
6. Treasurer's report.
7. Reports of Standing Committees.
8. Reports of Special Committees.
9. Unfinished business.
10. New Business.
11. Notices of Motion.
12. Election of Officers.
13. Election of Standing Committees.
14. Appointment of representatives to Industrial Exhibitions.
15. Induction of Officers.

This order of business may be suspended or varied at any meeting by two-thirds vote of those present.

QUORUM.

At all meetings of the Executive Council not less than five members must be present to constitute a quorum.

CONDUCT OF MEETINGS.

All meetings of the Executive Council and of Standing Committees shall be conducted as follows:—

1. If there should be no quorum within 15 minutes of the time fixed for the meeting an adjournment may be had.
2. Any member who may desire to speak must address the Chair. All motions must be made in writing. Any member who may have already spoken to a motion must obtain permission from the Chair to be again heard regarding it. The Chair may, at any time, announce that the subject is open for conversational discussion.
3. The Chair shall decide all questions of order.
4. A motion to adjourn shall always be in order.
5. In voting no proxies shall be allowed.
6. All motions shall be decided at meetings of the Executive Council or Committees by a majority of those present. In cases where the number of votes is equal, the President or Chairman, besides his own, shall have a deciding or casting vote.
7. With the exception of clause (1) the above rules shall govern the conduct of the general annual meeting and other meetings of the Association.

EXPENSES.

No liability shall be incurred in the name of the Association by any of the members or committees until it shall have been approved by the Executive Council.

All bills must be sanctioned by the Executive Council and paid by cheque. Employees' salaries shall be fixed by the Executive Council.

DUES AND PRIVILEGES.

The Annual Membership Fee in this Association shall be, for members employing under one hundred employees, \$10; for members employing one hundred or more employees, \$25; for each additional member, after the first, from any firm, \$10. The first payment shall become due on the election of a member, and each subsequent payment twelve months thereafter.

RESIGNATIONS.

All resignations of office or membership shall be in writing addressed to the Secretary, and shall be submitted by him at the next meeting of the Executive Council.

All dues must be paid in full before a resignation can be considered.

EXPULSION.

Any member may be adjudicated upon by the Executive Council if charged in writing with conduct unbecoming a member of the Association. If, in the opinion of a quorum of the Executive Council, action should be taken thereon, the President, or in his absence one of the Vice-Presidents, shall appoint a committee of five to investigate the charges made. The Committee with due diligence shall report in writing if the charges are sustained or not. The report having been considered by the Executive Council, the member so charged shall be notified in writing at least ten days before final action by the Executive Council, by registered letter to his last known address, to appear at next meeting of the Executive Council to defend himself. The Executive Council may, by a majority vote present at such meeting, suspend a member for a period of time or expel on a two-thirds vote.

AMENDMENTS TO THE BY-LAWS.

The By-Laws of the Association may be amended by a majority of the members of the Association present at any annual or special meeting called for that purpose, notice of such amendment having been given in writing to the Secretary twenty days prior to the date of the meeting, and it shall be the duty of the Secretary to forward to the members a copy of such amendment. It shall be in order that amendments to the amendment can be discussed and voted on at the same meeting.

TRANSPORTATION DEPARTMENT.

RAILWAY COMMISSION IN THE WEST.

Applications and Complaints heard by the Board in Winnipeg, Westminster and Vancouver.

The Board of Railway Commissioners for Canada held sittings at Winnipeg on the 11th, 12th and 13th of September and at Vancouver on the 21st, at which various applications and complaints were heard, including those of the Canadian Manufacturers' Association respecting the rules of Canadian Freight Classification No. 12; revised car service rules; and complaint of discrimination in connection with transcontinental rates from eastern Canada to North Pacific Coast terminals.

Winnipeg.

At Winnipeg, the Chief Commissioner, Chairman of the Board, explained to those present that as the applications of the Canadian Manufacturers' Association involved questions affecting shippers and receivers throughout the Dominion, the Board had considered it advisable as far as possible to give any interested parties who might wish to do so an opportunity of presenting their views respecting same during the sittings in the West, so that the Board would have the benefit of such views in considering the various matters complained of.

Classification.

On behalf of the Canadian Manufacturers' Association the Board was informed by Mr. Marlow that since the statement of complaint had been filed a conference between the Advisory Committee of the Canadian Freight Association and representative of this Association had taken place for the purpose of endeavoring to reach an amicable adjustment of the complaints respecting rule 1 covering minimum weights for cars in excess of 36 ft. in length; rule 6, requiring minimum charge for articles necessitating platform cars for carriage; rule 7, under which goods are accepted for carriage at owner's risk; and rule 30, covering minimum charge for single consignments commonly known as "smalls."

Mixed Carloads.

It was further stated that the railways were not prepared to modify rule 2 governing the shipment of merchandise in mixed carloads to meet the views of the Association, and, consequently, this matter would be presented to the Board for such action as might be deemed by them to be advisable in the premises.

A deputation representing the wholesale and jobbing interest of the Winnipeg Board of Trade appeared for the purpose of opposing the application of the Association and requested that the rule as at present embodied in the classification governing shipments to points west of Port Arthur should be sustained.

The case was then taken up on behalf of the Association by the Manager of Transportation who explained in detail the objections of the manufacturers, the discriminative nature of the present rule and the effect of the restrictions embodied therein upon free competition in trade. The Board of Trade representatives followed and stated the grounds of their objection to any change in the present rule. The principal objection appeared to be that if the former rule were restored and merchandise permitted to be carried in mixed carloads at the rate for the article having the highest classification in the car, it would permit the combination of various articles by manufacturers and others in eastern Canada who could ship through Winnipeg and compete for trade in the western markets. It was pointed out by the representative of the Association that if such a practice could prevail under the rule requested by our Association, there was nothing to prevent it under the present rule in so far as concerns the combination of articles listed in

the various groups or headings of the classification and permitted to be shipped thereunder in mixed carloads. The present rule undoubtedly discriminates between shippers and between commodities and subjects many manufacturers to undue disadvantage and prejudice in marketing their goods throughout the West. The question was gone into at length, but owing to limited space a full statement of the case is excluded from the present issue, and will be published in the succeeding number of INDUSTRIAL CANADA.

No objections or representations were made respecting the other rules of the classification.

Demurrage.

At the conclusion of the discussion respecting classification the chairman stated that the Board would receive any representations or testimony from interested parties regarding demurrage charges and the rules under which they shall be applied in view of the complaint of Canadian Manufacturers' Association and the proposed rules subsequently agreed to by the representatives of the railways and the Association and submitted to the Board for approval. It was the opinion of the Board that so far as possible the rules governing these charges should be uniform throughout Canada.

The railway representatives contended that the conditions surrounding transportation in the West, particularly in Manitoba and the North-West provinces, were such as to necessitate a variation of the rule as to the time allowed for unloading of grain, cordwood, stone, sand and gravel. They desired the present rule which allows only 24 hours for unloading of such traffic to be maintained. They also objected to the extension of time for unloading coal, coke and lumber. The Winnipeg Builders' Exchange, represented by Mr. H. M. Howell, K.C., applied for approval of the rules as agreed to by the Canadian Manufacturers' Association, with some slight variations, one of which was an extension of time for the unloading of lime. After some discussion it was agreed that a conference would be held between the railways and shipping interests for the purpose of endeavoring to reach an amicable agreement upon rules for the West. This course was approved of by the Board, with the understanding that the result of the conference would be made known to them on their return to Winnipeg during the first week in October.

Pacific Coast.

At the conclusion of the sitting in Winnipeg, the Board proceeded to the Pacific Coast to deal with various applications and complaints respecting British Columbia. The first sitting was at New Westminster on the 19th of September, and there a complaint of Mr. W. J. Pendray respecting distributing rates from Pacific Coast points to the interior, and also re mixed carload rates, was heard.

Mr. Pendray is engaged in the manufacture of soaps and paints, and although both these commodities are classified fifth class in carloads, the classification does not permit them to be shipped together at a carload rate. On the other hand soap, sugar, woodenware and a variety of other articles may be shipped in mixed lots under "groceries," and paints, nails, oil, etc., are accepted in mixed cars under "hardware." The result is that the manufacturer cannot compete with other dealers in the sale of his own goods.

Classification—Mixed Cars.

After dealing with a number of questions relating to railway operation and crossings, the Board adjourned to Vancouver where a sitting was held on the 21st ult., and the classification matters again taken up. A deputation from the Vancouver Board of Trade representing the wholesale and jobbing interests presented a protest against the application of the Canadian Manufacturers' Asso-

ciation re rule 2 covering mixed carload shipments. The Board of Trade representatives intimated that they desired carload rates applied to straight carload shipments of one commodity only and that mixed carload rates should be abolished. This was one step further than the Winnipeg Board of Trade, and, if approved of, would undoubtedly cause a serious increase in freight rates paid by shippers and receivers for transportation of their supplies. Although the wholesalers were desirous of abolishing the mixed carload rate on westbound shipments, it did not appear that they were willing that the mixed carload arrangement as now embodied in the classification should be cancelled in so far as it applied to shipments from the West to the interior. The objection to the mixed carload arrangement, asked for by the Association, was on the same ground as advanced at Winnipeg, namely, that it would increase competition in trade and would permit eastern shippers to combine carload lots of different articles of merchandise and ship to the West at a carload rate. The Board of Trade of Victoria, B.C., were also represented and announced their concurrence in the views of the Vancouver Board of Trade, but stated also that they approved of the application by Mr. W. J. Pendray for the mixed carload privilege. There appeared to be considerable misunderstanding on the part of the Pacific Coast Boards of Trade as to the exact nature of the application, doubtless owing to the fact that rule 2 of the Canadian classification was being construed as governing all commodity rates embodied in the Transcontinental Tariff. At the conclusion of the discussion, the representatives of the Boards of Trade asked to be permitted to place their views in writing and permission to do so was given.

Demurrage.

The demurrage charges and rules governing same were then discussed and a representative of the Great Northern Railway filed a written statement respecting same which in the main approves of the rules as agreed to between the railways and this Association, but suggests some changes intended to make the rules incapable of mis-construction. The representatives of the Canadian Pacific desired a modification of the rule respecting wet and stormy weather during the rainy season on the Coast. The matter was taken under advisement by the Board.

Transcontinental Rates.

Complaint by the Canadian Manufacturers' Association regarding transcontinental rates was again stated to the Board and the discrimination against eastern Canada in favor of United States shippers was pointed out. Particulars of the discrimination complained of have already been given in previous issues of INDUSTRIAL CANADA and need not be repeated here. The Boards of Trade of Vancouver, Victoria and New Westminster presented memorials to the Commission respecting the discrimination complained of and requesting removal thereof. Mr. B. W. Graer, representing the C.P.R., stated that the railway's reply would be made to the Board at Ottawa through the chief offices of the company. The chairman of the Board pointed out that a year had elapsed since the complaint had been first stated to the Board. He wished the railways to take notice that delays of this kind could not be tolerated for the future. The representative of the railway was instructed to see that a prompt reply was made and that copies were furnished to the interested complainants.

The Board of Trade of Vancouver, Victoria and Westminster also presented complaints against alleged discriminative distributing rates from Pacific Coast points eastbound as compared with rates from Winnipeg. This complaint is also to be answered by the railway through the Board at Ottawa. At the conclusion of the rate cases, the Board took up questions relating to railway crossings and interchange switching, but no decision with regard to the latter was announced.

DEMURRAGE CHARGES.

A meeting was held in Montreal in August last for the purpose of discussing revised rules governing the application and col-

lection of demurrage charges. The Canadian Car Service Association was represented by Mr. G. S. Cantlie, Superintendent of Car Service, Canadian Pacific Railway; Mr. M. C. Sturtevant, Car Service Agent, Grand Trunk Railway; Mr. J. E. Duval, Manager Canadian Car Service Association. The Canadian Manufacturers' Association was represented by Mr. J. R. Marlow, who also represented the Dominion Millers' Association and the Lumbermen's Association of Ontario. Mr. James Hardwell, Chief Traffic Officer of the Board of Railway Commissioners for Canada, was also present. After a conference lasting two days, the following proposed rules were agreed upon to be submitted to the Board of Railway Commissioners for Canada for approval.

Proposed Car Service Rules.

No. 1. All freight in carloads, or less, handled by shippers or consignees, is subject to a car service charge of \$1.00 per car, per day of 24 hours, or part thereof, if not loaded or unloaded within 48 hours.

Exception.—Twenty-four hours additional will be allowed on cars loaded with coal and coke in bulk, boards and deals.

No. 2. Cars delayed under load beyond free time for any rea-



MR. JOHN R. MARLOW,
Manager Transportation Department.

son for which shippers or consignees are responsible, will be subject to the car service charges.

No. 3. On cars placed before 12 o'clock, noon, free time begins at noon; if placed after 12 o'clock, noon, free time begins at 7 o'clock, a.m. following. Cars to be accessible at all times during the period allowed for loading and unloading. Time lost through interruption, for which the railway is responsible, to be added to the free time allowance.

No. 4. No charge will be made for Sundays or legal holidays.

No. 5. When, owing to wet or stormy weather, loading or unloading is temporarily impracticable, agents will extend the free time allowance so as to give altogether the full free period of suitable weather.

Agents must immediately report particulars to the manager, and note in their daily reports, "Waived Rule 4," opposite each car affected, giving dates on which the car service charge has not been assessed.

No. 6. When, owing to irregularities in transportation, cars have been "bunched" and are tendered to the consignee in numbers beyond his ascertained ability to unload within the authorized free time, he shall be allowed such additional time as may be necessary to unload the cars so in excess, by the exercise of due and usual diligence. The agent must at once report the particulars to the manager and obtain his ratification.

No. 7. When both cars and tracks are owned by the same private party, no charge will be made.

No. 8. Consignees must be promptly notified of the arrival of their freight, and will be held to have been notified when notice of arrival is given at their address or place of business, or if notice is mailed to the address given on the waybill, consignee will be held to have been advised at 7 a.m. of the day following.

No. 9. Twenty-four hours will be allowed to consignees, after notice of arrival, in which to pay charges, if any, and give orders for special placing or delivery. If not ordered within that time, car will be considered as for public team track delivery, and will be placed accordingly, and if not unloaded within the free time will be subject to the car service charge.

Twenty-four hours additional will be allowed for clearance of customs where the destination is a part of entry.

Where the destination is not a port of entry, 48 hours will be allowed for clearance of customs at the outside port of entry.

No. 10. The extra time after notice of arrival for paying charges and ordering will not apply on cars for which agents have previous or standing orders or arrangements for placing for regular delivery on designated tracks or private sidings.

No. 11. The delivery of cars to private tracks shall be considered to have been made either when such cars have been placed on the tracks designated, or when they would have been placed but for some condition for which shipper or consignee is responsible.

No. 12. If, after placing, cars are ordered to another siding on the same road to complete loading or unloading by the same shipper or the same consignee, and no switching or re-consigning charge is made, the free allowance will be computed from the original placing, less the time occupied in replacing the car.

No. 13. If the car is re-shipped or re-consigned, the original consignee shall pay \$1.00 per car, per day, or part thereof, for all time in excess of the period allowed by these rules, so that 48 hours free time may remain to the party taking delivery.

No. 14. Should a switching road give notice that it is unable to receive cars for private sidings, owing to conditions for which shippers or consignees are responsible, then any railway having cars for such consignees must so advise them. Car service will accrue until the cars are accepted by the switching road, and will be collected by the railway which is holding them.

No. 15. Cars held in transit for inspection, cleaning, bagging, completion or change of load, change of destination, etc., and detained over the time allowed for such purpose, will be subject to car service charges, which must be billed forward as directed by the Accounting Department. If such shipments are transferred to other cars, the car service will follow on the cars to which transfer is made. The forwarding agent, or in the case of change of destination, the agent by whom arranged, must make the following notation on the bill of lading: "Subject to car service charges at . . ." The amount must also be inserted in the "back charges" column of the bill of lading where practicable.

No. 16. So-called industrial, logging or private roads handling cars for themselves or other parties, must be charged car service on all cars delivered to them from the time placed upon the interchange tracks until returned thereto, allowance being made for the time necessary to perform the switching service (not to exceed 24 hours) in addition to the free time herein authorized.

No. 17. Cars must not be held short of the destination for the purpose of evading these rules. Loaded cars held back for cause must be reported to the manager.

No. 18. When cars are delayed or refused by consignees because of alleged incorrectness in the railway weights or charges, car service must be collected if charges or weights are found to be correct.

No. 19. Agents must in all cases collect car service charges as soon as accrued. Should payment be refused, agents will withhold delivery, either by sealing or locking car, or placing it where it will not be accessible.

No. 20. When the contents of a car are apparently not worth the combined freight and car service charges, and consignee fails

to take delivery, the agent must wire the manager for instructions.

No. 21. All complaints, disputes and uncertainties which may arise under these rules must be referred at once to the manager. The manager may reduce or cancel the charges should he consider that the circumstances justify such action.

Claims should be filed with the manager direct, and must be accompanied by the receipted bills for the amounts paid.

At the conclusion of the conference the railways announced that the rules agreed to were intended to be applied only in the territory east of Port Arthur, because it was stated that the conditions surrounding transportation in the territory west of Port Arthur necessitated a modification in the time allowance as per Rule 1, and respecting notice of arrival as per Rule 10. The rules regarding relief in stormy weather and when cars are bunched were not objected to for the west, and, as a matter of fact, have been embodied in the car service rules now in force west of Port Arthur.

Discussion of the Proposed Rules.

After the submission of the proposed rules to the Board of Railway Commissioners, a circular letter was issued by the Secretary of the Board, reading as follows:—

"I enclose herewith by direction of the Board, copies of Car Service Rules proposed to be applied east of Port Arthur, which have been submitted to the Board for approval.

The Board is of opinion that any rules which may be adopted should as far as circumstances admit, be of uniform application throughout Canada.

That every reasonable opportunity may be given to interested parties to be heard on the questions involved, the Board will be prepared to take evidence and hear representations at its sittings to be held at Fort William, Winnipeg and New Westminster on the 7th, 11th and 19th September, respectively, with respect to the allowance of charges for car service and the rules governing them.

At Winnipeg and Vancouver, where the Board held sittings during the month of September, the demurrage regulations were discussed. In Manitoba and the North-West Provinces the railways desire that the time allowed for the unloading of grain, cordwood, sand, stone and gravel should be restricted to 24 hours, owing, it is alleged, to peculiar conditions, surrounding the handling of the grain crop to the head of navigation, and also of the other commodities mentioned in the Winnipeg yards, where the bulk of such traffic is destined. On the Pacific coast a modification was asked for in the rule with regard to unloading during wet weather owing to the frequency and duration of rains in the wet season. So far as points east of Port Arthur are concerned, however, the rules outlined above have been agreed to, and, as soon as approved by the Board of Railway Commissioners, will be put in force. The Board may be relied upon to safeguard the interests of shippers and receivers should any modification of these rules be deemed necessary in the territory west of Port Arthur owing to peculiar conditions surrounding transportation in that district.

EXPORT RATE CASE.

The application of Canadian railways for suspension of the order of the Board of Railway Commissioners in the matter of export rates, referred to in our September issue, has been heard by the Board. The result of the application is explained in a communication received from the Secretary of the Board, which is accompanied by a supplementary order dated September 4th, both of which are published below.

It will be noted that the rates to ports in Canada and to Boston and Portland are to be made up on the basis of the original order, while a modification has been authorized in the case of rates to New York, Philadelphia and Baltimore.

The letter reads as follows:—

OTTAWA, September 5th, 1905.

Re Export Rates.

Sir,—I am directed by the Board to inform you that it has had under consideration an application by some of the railway companies affected to hold in abeyance the order of the Board

dated the 25th of July, A.D. 1905, respecting rates on export traffic from points in the Province of Ontario, pending an opportunity to present to the Board the position in which they would be placed by the enforcement of the rate basis ordered. The groups and rates established by the order of the Board were arrived at by the Traffic Department of the Board after very great labor and study, which occupied a considerable length of time.

The decision of the Board having been so long delayed through these and other circumstances, the Board felt that its order should be issued as soon as possible, without the delay that would have been involved by allowing previous discussion of details.

Some railway companies having applied to have the order held in abeyance, the Board considered that, under the circumstances, full opportunity should be given to them to state objections in matters of detail, without attacking the principle of the Board's decision that rates from points in the Province of Ontario to ocean points should, in general, be fixed on a decreasing scale from the River Detroit eastward.

After hearing this application, the Board sees no reason for varying its order at present as regards the export rates to ports in Canada. One claim set up by the railway companies has been that, on account of the Board being without the power to regulate rates upon railways in the United States, the loss through a decrease in rates to United States ports would fall almost entirely upon the Canadian railways, involving an unjust and unreasonable diminution of their profits.

The Board has been convinced that it should not insist upon the enforcement of the order in these respects without further enquiry and consideration, which it is impossible for the Board to make and give immediately.

The railway companies have proposed some modifications of the order which would make it for certain groups of stations more favorable to the railway companies, but would leave it more favorable to the public than were the rates heretofore prevailing, and the Board considers it reasonable to adopt these modifications for the present. If, upon their full purport being known and considered, either the railway companies or the shipping public desire a further variation, the Board will be pleased to hear them, and to give the subject further consideration at as early a date as may be found possible.

I have the honor to be, sir,

Your obedient servant,

(Sgd.) A. D. CARTWRIGHT.

J. R. Marlow, Esq.,

Manager Transportation Dept., Can. Mfrs'. Assn., Toronto.

The text of the supplementary order is:—

In the matter of the application of the Canadian Pacific Railway Company and the Grand Trunk Railway Company of Canada, hereinafter called the "railway companies," that the order of the Board in the matter of the complaint of the Dominion Millers' Association, dated the 25th day of July, A.D. 1905, be held in abeyance pending an opportunity to the railway companies to present to the Board the position in which they will be placed by the enforcement of the rate basis ordered.

Whereas by the said order, dated the 25th day of July, A.D. 1905, it was provided, *inter alia*, that certain station groupings and percentages of the Chicago to New York rates should be substituted for those previously adopted on freight traffic for export from Ontario to the Canadian and United States Atlantic seaboard,

And whereas at the hearing had in this matter on the 29th day of August, A.D. 1905, it was represented to the Board, on behalf of the railway companies, that the said order would work a hardship and injustice to them in respect of traffic to New York and ports south thereof, and the Board was urged to approve in lieu of the station groupings and percentages provided in said order, a new list of station groupings and percentages which they considered should govern the rates to the said port of New York and ports south thereof, the said new lists being from certain groups more favorable to the railways than that embodied in the

order of the Board, dated July 25th, 1905, but more favorable to the public than the basis of rates heretofore charged.

Upon the report of the Chief Traffic Officer of the Board recommending the acceptance of the said new list of stations and percentages in substitution of those provided for in said order of July 25th, 1905.



MONTMORENCY FALLS, NEAR QUEBEC.

It is ordered that the said order of the Board, dated July 25th, A.D. 1905, be, and the same is hereby amended by substituting, in lieu of the station groupings and percentages embodied therein, the following station groupings and percentages of the Chicago to New York rates to New York, with the customary differentials to Philadelphia and Baltimore:—

Group No.	Percentage
1. Niagara Falls to Paris, Brantford, Jarvis and Niagara Peninsula.....	70%
2. East of Hamilton to Toronto, inclusive, thence west along main line Grand Trunk Ry. to Berlin, and Waterloo and points south thereof not included in Group 1.....	73%
3. East of Toronto to Port Hope and Peterboro, inclusive, thence west along line Grand Trunk to Lindsay, through Manilla and Blackwater Junction to Scarboro and Whitby and stations within that group; also north of Waterloo, Guelph, Georgetown and Brampton, including line of C.P.R. Brampton to Elora; also north of Toronto to King and Kleinburg; also north of Port Hope to Peterboro and intermediate stations.....	75%
4. East of Port Hope and Peterboro to Kingston and Sharbot Lake, inclusive, and intermediate territory; Madoc Branch; west of Kleinburg to Grand Valley and Shelburne, both inclusive; also intermediate points north of Inglewood to Alliston and Allandale, north of King to Barrie; north of Stouffville to Jackson's Point; north of Blackwater Jet. to Lorneville Jet.; north of Lindsay to Fenelon Falls and Bobcaygeon; north of Peterboro to Lakefield.....	78%
5. North of Alliston to Collingwood; north of Barrie to Atherly Jet., Midland, Penetang, Collingwood; north Lorneville Jet., to Cobocok; west of Lorneville Jet. to Orillia.....	82%
6. West of Collingwood to Meaford.....	85%

The percentages from stations not included in the list given above to be the same as set forth in the order of the Board, dated July 25th, A.D. 1905.

(Sgd.) A. C. KILLAM,

Chief Commissioner,

Board of Railway Commissioners for Canada.

LABOR COLUMN.

U. S. Manufacturers and the Eight Hour Day.

PERHAPS the most prominent feature of the labor situation at the present time is the strike of the printers for an eight-hour day. The movement is a general one, embracing a large number of the most important cities in the United States. As yet the only Canadian city to feel its effect has been Winnipeg, where the fight is now on in real earnest, but no doubt as soon as existing contracts have expired in other places the strike will become widespread.

In view of the stand which the Dominion Trades and Labor Congress have taken in favor of an eight-hour day throughout Canada, and the trouble with which not only the printing trade, but every line of trade in the country is thereby threatened, it is important that members of this Association should know the attitude which has been adopted by the National Association of Manufacturers in the United States with regard to the question. It is embodied in the following resolution:—

WHEREAS, The Typographical Labor Union is now engaged in a combined attack upon employing printers in various parts of the country, to enforce various union rules, and said labor union is encouraging its members to strike and so far as possible paralyze the general printing industry; and

WHEREAS, This demand for closed union shop conditions, under which the labor trust seeks to make it impossible for any free American to sell his labor, is a demand for conditions intolerable, tyrannous, and illegal, its illegality being clearly defined by various late court decisions, the substance of which is here briefly summarized: The right to dispose of one's labor as he will, and to have the benefit of one's lawful contracts is incident to the freedom of the individual, which lies at the foundation of the government in all countries that maintain the principle of civil liberty. An intentional interference with such a right without lawful justification is malicious in law, even if it is from good motives and without express malice. A contract between an employer and a labor union looking to the establishment of a closed shop does not constitute lawful justification, for such contract tends to the creation of a labor monopoly or trust. On the contrary, such contract renders both the employer and labor trust legally liable to any person whose interests are injured thereby; and

WHEREAS, The union demand for a material increase in their already high wages (cloaked under the disguise of an eight-hour day) would force the price of all printing to advance beyond the present prices, already burdensome to the public; and

WHEREAS, This attack upon the printing employers and the effort by the labor trust to force higher prices on the people are a trust movement, against the interests of the people and solely in the interests of the members of the labor trust; therefore, be it

RESOLVED, That the National Association of Manufacturers recommend to its members universal support of the employing printers in resisting these attacks, the purchase of printing of the lawful open shops, and active legal prosecution of both employer and union members, parties to any unlawful closed shop agreements; and, further, that members and other business men be urged to refrain from enforcing contracts for printing during illegal attacks of labor unions.

The British Working Man.

The following description of the British working man, taken from *The Liberty Review* (London), and subsequently reproduced in the *Toronto Mail and Empire* hits off a number of situations that appeal to us with a strange air of familiarity.

For years past "the British working man" has been a standing joke. The comic papers have exhausted their ingenuity in portraying him in his true colors; his name has long been a synonym of laziness, fraud, and imposture; his habits have become

the object of universal derision. By working as little as he can, and by drawing more wages than he earns, "the British working man" has benefited the foreigner more than all the tariffs in existence.

On the other hand, the foreign workman does work. Compare the men who do the asphaltting in our streets with the roadmen and paviors employed by the municipal corporations. The other day we observed some gangs of these men. The foreign asphalters worked as they should work, the municipal shirkers shirked as they always shirk. We saw nine of these latter standing either with folded arms, or with hands in pockets, or resting on tools, watching another clipping pitch off a wood brick—fifteen strokes to the minute. Recently a gentleman living in a large house twenty miles from London desired his drawing-room decorated in a particular way and in a stated time, and obtained estimates for the work from several London houses. The prices were immaterial, but not one of the firms could guarantee to complete the work in the time stipulated, their workmen refusing to work more than a few hours a day, and the union to which the men belonged objecting to overtime. The gentleman thereupon applied to a Paris house, which sent men over without an hour's delay; these men finished the job in half the specified time, and the price was less than half the lowest quoted by the London trade.

We know of many similar cases. Why have so many industries left England of recent years? For no other reason than that the "British workman" won't work reasonable hours for reasonable wages. He is made an idol of by the politician, a slave and shirker by the union, and then he demands to be protected against the industrious, unfettered, and unspoiled foreigner.

What a farce it is! Old England is becoming madder every day. The conspiracy against honest work is extending in all directions. Objection is taken by one set of cranks to women earning their own living as barmaids, while another set object to men earning a livelihood by selling refreshments on Sundays. Various forms of employment are denounced as degrading, and soon we shall have a proposal to abolish work altogether, and to make men and women angels pure and simple. A Fulham schoolmaster rejoicing in the name of Fooks objects to boys being employed in farriers' shops, on the ground that "the men use coarse language to the animals, and are sometimes cruel to the animals." This, in his opinion, "tends to blunt a boy's susceptibilities." Surely the proper thing would be to prohibit farriery altogether, and have done with it.

What a Labor Man Thinks of Trade Unions.

William D. Haywood, Secretary of the Western Federation of Miners, and one of the leading spirits in the formation of the Industrial Union, which is intended to take in members of all the working classes, says that trades unions are as much out of place in this day and age as the pony express and the stage coach.

"Trade unions," he says, "are nothing more or less than a labor monopoly. They are trusts just as much as the Standard Oil and Sugar trusts. They attempt to restrict the supply of labor in order, as they think, to hold up wages. Through the apprentice system they are making tramps of hundreds of young men by denying them the right to learn a trade. They attempt to dictate to employers whom they shall hire and how much they shall pay. They do not permit employers to give young men a chance to better their conditions.

"The American Federation of Labor people say the American labor union is too radical. It is due to the fact that we have been holding up the trades unions until we are tired of it." Haywood's statements have caused a sensation in labor circles.—*San Francisco Call*.

THE MANUFACTURERS OF CANADA.

To Mr. C. C. Ballantyne belongs the distinction of being the youngest President the Canadian Manufacturers' Association has ever had. Only thirty-eight years of age, he has attained the highest office in the gift of what is without doubt one of the most influential commercial organizations in the Empire, a fact which of itself speaks volumes for his ability and his popularity.

Like so many men who have achieved success by their own unaided efforts, the story of his life is a simple one, and quickly told. He was born at Colquhoun, Ontario, August 9th, 1867. The rudiments of his education were received in the proverbial little red school-house, after which he took a course in the Montreal Commercial College. At fifteen years of age he started out to earn his own living. Three years later he became special city salesman for the Walter H. Cottingham Co., covering both Montreal and Quebec, a position which he continued to occupy after the consolidation of that concern with the Sherwin-Williams Co., in 1896. In 1897 he was appointed Manager of the Sales Department for the city of Montreal, and a few months later saw his promotion to the position of Division Sales Manager.

It was in 1899 that the Sherwin-Williams Co. began to cast about for a man whom they could entrust with the management of their entire business throughout Canada. The position called for one of wide experience and thorough acquaintance with the Canadian field, one who could keep closely in touch with and meet the changing conditions of the trade in the various provinces, one of keen insight and executive ability. Mr. C. C. Ballantyne received the appointment, and it is scarcely necessary to add that the company have never had cause to regret their decision. Under his guidance their Canadian business has experienced a rapid and substantial development, of which the establishment of a distributing depot in Winnipeg in 1902 and the erection of a large new factory in Montreal the following year are the most prominent features.

Mr. Ballantyne's connection with the Canadian Manufacturers' Association dates from the early part of 1900. That was the year which witnessed the amalgamation of the Montreal association with the Dominion organization, and Mr. Ballantyne's influence was largely instrumental in effecting the union. It was in recognition of his services in this connection that he was elected to the First Vice-Presidency at the Convention of that year, an honor which he accepted, though his modesty compelled him to decline the Presidency when urged upon him in 1901. Since then he has continuously served as a member of the Executive Council and of the Montreal Branch Executive. He was Chairman of the Montreal Branch in 1903-04, and 1st Vice-President of the Association in 1904-05.

To his exceptionally keen business abilities Mr. Ballantyne adds a magnetic personality which has made him one of the most popular of the young business men of the Dominion. His

unfailing courtesy, his kindly consideration for others, and his genial disposition have won him a host of friends, while his intense loyalty to the Association and his unswerving devotion to duty, mark him as a successful leader. No President of the Association has ever assumed office with heartier support or with brighter prospects for a successful year.

With his high ideals and his untiring enthusiasm, we may confidently look for his expectations to be realized.

MONTREAL BRANCH HONORS MR. GEORGE.

On Saturday evening, September 16th, a complimentary banquet was tendered to Mr. W. K. George by the Montreal Branch of the Canadian Manufacturers' Association. There was a large representation of local men, and a number of visiting members who were in the city on their way to Quebec also availed themselves of the opportunity to do honor to their distinguished President. From first to last, the affair proved a most enjoyable one, and passed off with all the éclat so characteristic of functions undertaken by the Montreal Branch.

It was held in the banquet hall of the Canada Club, Mr. D. Lorne McGibbon presiding. With him at the table of honor were Mayor Laporte, Mr. W. K. George, Mr. J. J. McGill, Mr. C. C. Ballantyne, Hon. J. D. Rolland, Mr. W. I. Gear, President of the Board of Trade, Mr. Cattelli, Vice-President of the Chambre de Commerce, Mr. Jas. P. Murray, Mr. Geo. Booth and Mr. R. J. Younge.

Cables and telegrams expressing regret for their inability to attend were received from Lieutenant-Colonel J. H. Burland, Sir Geo. A. Drummond, Mr. MacDougall and Mr. R. R. Stevenson.

The first toast, that to the guest of honor, was ably proposed by Mr. J. J. McGill. Mr. McGill spoke in glowing terms of the magnificent results achieved by the manufacturers' excursion to Great Britain, particularly in opening the eyes of the British public to the splendid opportunities existing in this country for the investment of their capital. No small part of the credit for these bene-

fits was due to Mr. George himself, who, by his rare tact, his unfailing courtesy, and his pronounced ability as a public speaker, had compelled the admiration even of the bitterest opponents of his policy.

Mr. George on rising to reply was greeted with an ovation. After expressing his appreciation of the honor which had been done him, he referred at some length to the question of Imperial Preferential Trade, re-affirming his belief in the feasibility of Mr. Chamberlain's proposal, and stating that the fairness and justice of the Canadian manufacturer's contentions were universally recognized in England.

Other toasts honored were,—“Mayor Laporte,” proposed by Mr. S. Ewing; “Sister Trade Organizations,” by Mr. C. C. Ballantyne, Mr. W. I. Gear and Mr. Cattelli; “Our Association,” by Hon. J. D. Rolland and Mr. R. J. Younge.



MR. C. C. BALLANTYNE,
(The Sherwin-Williams Co.),
President Can. Mfrs. Assoc'n. 1905-06.

AMONG THE INDUSTRIES.

Extensive additions are being made to the planing mill of Robert Stewart, Limited, Guelph.

Whitby, Ont., is to have a windmill industry. Mr. D. L. Holden and others are said to be interested.

The Frost & Wood Co., Limited, of Smith's Falls, will build a large warehouse in Edmonton in the near future.

The Dominion Antimony Company will spend \$75,000 upon a complete plant for their mine at West Gore, Hants Co., N.S.

The Montreal Suspender & Umbrella Mfg. Co., will remove to Arnprior, Ont., the municipality having voted them a loan of \$35,000.

The Dominion Oilcloth Co., Limited, are building a new factory of solid brick and stone on Parthenais Street, Montreal, to cost \$10,000.

The Canadian Copper Co. are building a \$50,000 plant at Copper Cliff for the treatment of auriferous mispickel ores coming from the Temagami Lake region.

The London Machine Tool Co. have decided to remove to Hamilton. An excellent site has been secured and work on their new factory will be commenced at once.

The Adair Manufacturing Company has been organized with a capital of \$75,000 to erect iron works in Revelstoke and manufacture the patent Adair Stump Burner.

The Temagami Lumber Company, Limited, has recently been incorporated with a capital of \$300,000 to carry on a general saw milling business. Their head office will be in Orillia.

A factory that will cover an acre of ground, that will give employment to 400 hands, and that will turn out 100 buggies a day is what the Baines Carriage Co., of Buffalo, is planning to erect in Hamilton.

An Ontario charter has been taken out by The Canadian Tool Company, Limited, of Woodstock, Ont., for the purpose of manufacturing tools, machinery, engines and other iron and steel products. Their authorized capital is \$100,000.

The Dominion Copper Co. have announced their intention of building a new smelter in the boundary district of British Columbia. The exact location is not yet known, but it is believed it will be in the neighborhood of Grand Forks.

The Fowler Canadian Co. will double its plant in Hamilton at an expenditure of from \$50,000 to \$60,000. The intention is to branch out into the beef trade. When alterations have been completed they will maintain a staff of 300 men.

Messrs. Malcolm, Cannon & Co., proprietors of the English Bay Cannery, near Vancouver, have decided to remove to the Skeena River. Their new plant will be built on Smith Island, and everything will be in readiness to pack next season.

Work is proceeding rapidly on the new pulp and paper mill which is being erected on the Chaudiere, at Ottawa, by Mr. J. R. Booth, the concrete foundations being now almost completed. The entire undertaking will involve an outlay of nearly a million dollars.

The Munro Wire Works branch factory in Winnipeg is now in full operation, turning out all kinds of steel and wire fencing, grills, gates and wire bed mattresses. The latter, of which a specialty is being made, are shipped in large quantities to Vancouver and the Orient. In the spring it is the firm's intention to build a new brick factory, to be devoted entirely to the manufacture of upholstered mattresses.

Messrs. I. D. Bradshaw & Co., are now established in their fine new three-story brick factory on Atlantic Ave., Toronto. Their staple line of chewing gum is being turned out in larger quantities than ever, in addition to which they have gone in extensively for the manufacture and printing of waxed paper wrappers.

Mr. John Hanbury, of Brandon, Man., who already operates saw mills in Brandon, Cranbrook, Moyie and Elko, recently purchased the plant of the British Columbia Box and Lumber Co., at Vancouver. It is understood that box-making will be discontinued temporarily, pending certain alterations and enlargements.

The Dominion Iron & Steel Co., has received an order from the Grand Trunk Pacific Railway for rails to the value of \$4,000,000. They are to be manufactured at the Sydney plant, and the time of delivery is to be extended over five years. The order will mean 150,000 tons of rails, or 600 tons a week for the period of the contract.

The new industries to be located in Fort Frances for utilizing the 15,000 horse power which will be available on the Canadian side of the river, include a 600-ton pulp mill, a large flour mill, a sash and door factory, a woodenware factory, a saw mill, besides a number of other establishments with which negotiations are now under way.

What is said to be the largest order for rolling stock ever issued by the C. P. R. was recently given to the Angus shops in Montreal. It represents in all about \$3,000,000, and calls for 25 parlor, dining and sleeping cars, 90 passenger coaches and 3,000 freight cars. Thirty locomotives are also under way for the company in the same shops.

The Plymouth Cordage Company, of Plymouth, Mass., turned the first sod for their Canadian branch factory at Welland on Sept 27th. The main building will be 635 x 115 feet, principally two stories. They will engage in the manufacture of binder twine, rope and cordage of every description, and will furnish employment to about 400 men.

It is reported that the Nova Scotia Steel & Coal Co. has in contemplation a shovel factory for North Sydney. An extensive market is to be had in the Maritime Provinces and in Newfoundland, and all the new material necessary is already manufactured by the company at Sydney Mines. In addition to shovels, picks and miners' tools would also be made.

The plant of the British-American Can Co., Sarnia, Ont., has been purchased by the Acme Can Works, Montreal, and removed to that city. By this move the capacity of the Montreal concern will be increased to 165,000 cans per day. They are now preparing to erect a large new building, and to install the necessary machinery for the manufacture of wire and solder.

The Western Canada Flour Mills Co., Limited, is the name of a new concern which proposes to erect a 4,000-barrel mill in the vicinity of Winnipeg. It will take over the business at present operated by the A. Kelly Milling Co., of Brandon, and the Lake Huron & Manitoba Milling Co., of Goderich, so that in all it will have a daily milling capacity of 6,500 barrels of flour and 200 barrels of oatmeal.

Work was recently commenced upon the erection of an up-to-date two-story factory of brick and steel for Henry Disston & Sons, Limited, the big saw manufacturers of Philadelphia, who have secured a large site on Adelaide Street East, Toronto. Mr. W. E. Radcliff, who will have the management of the Canadian Branch, expects to have the factory in operation before the first of the year, and to employ at the outset about 75 hands.

TRADE ENQUIRIES.

NOTE.—For further information regarding any enquiry mentioned under this heading or the names of enquirers, apply by number to the Secretary, at Toronto.

- 68 Agencies—New Zealand—A correspondent in Auckland, New Zealand, writes with the purpose of securing the representation of Canadian firms in New Zealand.
- 69 Belfast, Ireland—A correspondent in Belfast, forwarding first-class references from well-known and responsible firms, desires to procure the representation of Canadian firms anxious to do business in Great Britain. Copies of references will be forwarded from this office on request.
- 70 Hamburg, Germany—A company in Hamburg, Germany, having London, Paris and New York offices, are prepared to handle the agencies for Canadian firms in Europe.
- 71 Hamburg, Germany—A Hamburg, Germany, firm desires to work up agencies for Canadian wood pulp, wrapping and printing paper, etc.
- 72 Quebec, Que.—A young man offering to provide first-class references is desirous of securing the agency for Canadian firms for the City of Quebec and vicinity.
- 73 Calcium Carbide—A firm in Hereford, England, wishes to communicate with a Canadian firm open to ship calcium carbide.
- 74 Cereals, Wheat, Oats, Barley, Linseed—A wholesale broker and commission merchant, established for 10 years in Bruges, Belgium, writes, calling attention to the advantages of shipping from Canada direct to the port of Bruges. The correspondent has seen the Canadian exhibit at Liege, and speaks very highly of the same, and is now anxious to dispose of Canadian products as above in Belgium. He has a large connection, sends good references, and is prepared to make very favorable terms to get the business started.
- 75 Cheese, Butter, Canned Salmon, Canned Fruits and Vegetables, Canned Meats and Tongues, Apples and other Fruits—A Belfast, Ireland, merchant with large business experience and extensive connections, desires the names of Canadian firms exporting the above, preferably those not already represented in the United Kingdom, with a view to becoming their representative.
- 76 Cotton Goods, Canadian Wonder Beans, Tables and Furniture—An exporting house in London, England, has had called to its attention certain lines of cotton goods manufactured in Canada for the Australian and South African market, and desires to get in touch with manufacturers of the same. He is also desirous of getting in touch with exporters of the other lines mentioned above.
- 77 Cream of Tartar, Furniture, Leather, Brushes, Curry Combs, Advertising Specialties, Shoe Laces, Linoleum, Carpets, Flannelette—A company with headquarters in Melbourne, Australia, well recommended, states that there is a large demand at present for cream of tartar in barrels containing 1 cwt. net, the greatest demand is for that having a strength of 95 per cent. Quotations are asked c.i.f., Melbourne. Samples and prices are requested. This firm also handle the above-named goods, and are open to buy the same in Canada, and request catalogues and price lists. A satisfactory reference is provided.
- 78 Doors, Dowels and Spruce Lumber—A Manchester, England, firm desires specifications and prices, c.i.f., Manchester, from Canadian manufacturers of doors and dowels, and prices of spruce lumber from Canadian shippers of the same.
- 79 Flour—(a) A company of general merchants in Yokohama, Japan, asks for the names of manufacturers of flour prepared to handle export business to Japan.
- 80 (b) A commission agent in West Bromwich, England, wishes to represent a Canadian shipper of flour.
- 81 Fruits, Canned—An English firm of manufacturers of table delicacies wish to communicate with Canadian packers of canned fruits with a view to handling a special brand in the United Kingdom.
- 82 Furniture, Church—One of the largest South African importers of lumber and builders' supplies is desirous of dealing direct with a Canadian manufacturer of church furniture in fumed oak, etc.
- 83 Furniture—A commission agent in Cape Town, South Africa, desires to represent a Canadian manufacturer of furniture and an export lumber firm.
- 84 Grain, Seeds, Flour—A wholesale importer of the above-named articles in Antwerp, Belgium, is prepared to handle the same either on commission or on his personal account. He asks for quotations c.i.f., Antwerp, and sends as reference his bank.
- 85 Hams, Bacon, Lard, Tongues, Etc.—A Birmingham, England, commission agent wishes to represent firms in Canada handling the above.
- 86 Handles, Pick and Shovel—An English correspondent who acts as an export selling agent for several large manufacturers of shovel handles and similar tools, writes that he can place large quantities of handles among his friends. He solicits correspondence from Canadian firms.
- 87 Handles, Broom—A Sunderland, England, house wishes to hear from Canadian manufacturers of the above.
- 88 Hay—(a) A firm importing hay largely in London, Liverpool and Glasgow, desires to correspond with Canadian shippers.
- 89 (b) A Cardiff, Wales, produce merchant, would be pleased to receive quotations c.i.f., Cardiff, from Canadian shippers of hay.
- 90 Honey—A Pittsburg, U.S., firm is desirous of obtaining the names of Canadian exporters of honey in comb.
- 91 Laths, Sawn Spruce and Pine—A Lancashire, England, firm now obtaining supplies from the Baltic, desires prices from Canadian shippers of the above c.i.f., Manchester, in bundles of 500 feet, sizes 1½ in. x 3-16 in.; 1 in. x 3-16 in.; and 1¼ in. x 3-16 in.; lengths of 3 ft. 6 in.; 4 ft. and 4 ft. 6 in.
- 92 Log Huts, Bungalows or Portable Cottages—A civil engineer and architect in Hawkhurst, Kent, England, desires to communicate with Canadian firms manufacturing the above lines.
- 93 Lumber—The largest furniture manufacturing firm in South Africa desires to communicate with a Canadian firm of export lumber merchants for the supply of the following varieties of wood for use in their factory:—Ash, 1 ft. x 7 ft. up; birch, 3 ft. to 4 ft. x 6 ft. to 12 ft. (state locality of growth); elm, 3 ft. to 4 ft. x 6 ft. to 12 ft.; cherry, 3 ft. to 4 ft. x 12 ft. and up; walnut, 1 ft. x 6 ft. to 12 ft.; pine, (P.) 3 ft. to 4 ft. x 12 ft. Send samples and c.i.f., Cape Town quotations.
- 94 Machinery (Baking), Flour, Split Peas, Preserved Fish, Canned Salmon, Beef Products, Linseed Oil Cake, Cooked and Canned Meats, Poultry, Cotton Seed Oil, Linseed Oil, Lard, Canadian Wines, Cheese, Evaporated Fruits, Glucose, Gluten, Bacon and Condensed Milk. A wholesale dealer in food products, doing business in Roux, Belgium, desires quotations from Canadian shippers of the above lines, c.i.f. Antwerp. Good references are given.
- 95 Machines (Coin-in-the-Slot and Talking), Advertising Novelties, Cash Registers—The names of manufacturers in Canada of the above are asked for by a London, England, agent open to represent such firms.

- 96 **Merchandise (General)**—A firm of shipping agents and general merchants in **Sydney and Newcastle, Australia**, are prepared to purchase in Canada such goods as suit the Australian market. They will arrange for cash payments at port of shipment and take advantage of all cash discounts. They ask for catalogues with export prices.
- 97 **Mica**—A **Manchester, England**, firm is desirous of corresponding with Canadian shippers of the above.
- 98 **Nuts and Bolts (Carriage)**—A **Manchester, England**, firm now obtaining supplies from the United States, wishes to obtain prices on the above articles from Canadian manufacturers of the same.
- 99 **Oatmeal, Pure and Compound Lard**—A company of warehousemen, shipping and customs agents in **Cape Town, South Africa**, with places of business in five other South African centres, asks to be put in touch with manufacturers of the above. They state that a large business can be done if they could secure the right goods.
- 100 **Paper and Envelopes, Gasoline Engines, Pumping Engines, Boot and Shoe Leather, Perfumery, Flavoring Extracts, Pharmaceutical Preparations, Biscuits, Confectionery, Condensed Milk, Ropes and Cordage, Butter, Cheese, Flour and Feeds, Tobacco, Soap, Fruit Syrups, Shoe and Leather Polish.**—A traveller with headquarters in **St. George's, Grenada, B. W.I.**, and covering the West India Islands, is open to accept agencies for Canadian firms in the above lines, and will handle their goods on purely commission basis.
- 101 **Petroleum Products and Lubricating Oils**—A company in **Antwerp, Belgium**, sending four references, desires to communicate with Canadian manufacturers of petroleum products, particularly lubricating oils. They ask for prices, f.o.b., port, with samples.
- 102 **Pottery, Tobacco Pipes**—An **English** correspondent has made enquiry for the addresses of Canadian potteries and manufacturers of tobacco pipes.
- 103 **Props (Pit)**—Full information regarding specifications for pit props such as are used in the Welsh collieries, have been received from correspondents in **Newport, Monmouthshire, England**. Large openings offer and correspondence is invited.
- 104 **Provisions (Canned and Preserved), Fruit, Fish, Vegetables, Etc.**—A firm of **English, colonial and foreign agents and representatives** are desirous of securing the agency for the **United Kingdom** of actual producers and packers of Canadian produce, particularly the above-mentioned articles.
- 105 **Shirts (Gents'), Ladies' Blouses and Shirt Waists, Paper, Furniture, Hardware, Tinware, Boots and Shoes, Flavoring Extracts, Flour, Flags, Jewelry, Paints, Stationery, Perfumery**—A dry goods and general merchant established in **Nassau, Bahamas**, in the retail business since 1902, desires to purchase the above-named goods. This firm are agents of some large shipping companies and are prepared to purchase draft against documents.
- 106 **Suspenders, Garters and Belts**—A wholesale manufacturers' agent established in **London, England**, in 1901, desires to handle on a commission basis the above-mentioned articles. He mentions a number of important firms with whom he is in close touch, and who will handle the goods provided they are satisfactory. He states that in order to get business this season it will be necessary to have samples at once.

COOPERAGE PLANT NEEDED IN WINNIPEG.

Editor INDUSTRIAL CANADA:

SIR,—As you may be aware, our local lime manufacturers who have in previous years, besides supplying the Winnipeg market, shipped their lime to all Canadian points between Winnipeg and

the Rockies, have this year lost nearly all their trade outside of the vicinity of Winnipeg, to the Duluth (Keeley Island) manufacturers: that is to say, instead of participating in the vastly increased building activities of the province, and doing twice the business of the previous year, they have actually lost nearly all they hitherto possessed.

This year, probably 150,000 barrels of lime have been imported from Duluth for western points, while shipments from Winnipeg have probably not reached 15,000; and this in spite of the fact that our plants have quadrupled the last year or two and are amply able to fill all demands.

It is evident that to regain this trade, something must be done and done quickly, as the longer Duluth people retain it, the harder it will be to dislodge them. Moreover, if the business be 150,000 barrels this year, next year it will be 250,000, and in a few years probably half a million.

Our manufacturers made representations a day or two ago to the Tariff Commission, asking that the duty on lime be increased from 20 per cent. to 30 per cent., with an additional duty on the barrel of ten cents, and I understand that similar representations will be made in the east. But this, however satisfactory to easterners, will not of itself be sufficient for us to regain the western trade, as we are not in the fortunate position of the eastern lime men in having barrels made at our door as cheaply as at Duluth.

While the Duluth manufacturers can make their barrels and invoice them for customs purposes at 20 cents each, ours cost 35 cents on the car in shooks, and probably 45 cents by the time they are set up. We are thus at a disadvantage of 25 cents a piece on the barrels, which is offset by only 15 cents in the duty. Add to this that fuel is much cheaper at Duluth than here and that their lime is somewhat "fatter," and you can see at what a disadvantage we are placed. In fact, we can scarcely deliver lime to Brandon, only 150 miles west of Winnipeg, much less to points farther west and consequently nearer North Portal, where the Soo Line enters Canada.

Now it is evident that here is a first-class opening for an eastern barrel manufacturer to step in and do a good business from the start. There is plenty of poplar in the vicinity of Winnipeg suitable for the purpose, and the demand would be instantaneous and a rapidly increasing one. There would also be a demand for barrels for other purposes, e.g., fruits, beer, etc.

Could we obtain barrels at say 20 cents apiece, we should be in the following position in shipping, say, to Brandon:

DULUTH TO BRANDON.		WINNIPEG TO BRANDON.	
Lime, 180 lbs.....	.55 cents.	Lime, 180 lbs.....	.55 cents.
Barrel, 120 lbs.....	.20 "	Barrel, 120 lbs.....	.20 "
Duty, 20%.....	.15 "	Duty, 20%.....	.28 "
Freight at 24c.....	.48 "	Freight at 14c.....	.28 "
Total.....	\$1.38	Total.....	1.03

There would thus be a difference of 35 cents per barrel in our favor, which would, however, diminish farther west. If the Tariff Commissioners grant the increased duty asked for, the duty would be 26½ cents instead of 15 cents, a further advantage of 11½ cents; and doubtless, if we reached this point, the railway companies would still further assist us in special freight rates to points near the field of the Soo Line.

I think the above is sufficient evidence of our ability to oust the Duluth men from the field, once we can get barrels at a reasonable price; but it cannot be too strongly urged that the need is an immediate one. Something must be done and done at once. If you can succeed through your Association in inducing a barrel manufacturer to establish a plant here, you will undoubtedly be doing a great service in regaining and securing an important industry for Canada.

Yours faithfully,

A. E. PORTER,

Secretary, Winnipeg Builders' Exchange.

Winnipeg, Sept. 25th, 1905.

MONTREAL EXECUTIVE COMMITTEE

Review of the Year's Transactions as Presented at the Branch Annual Meeting

TO THE MEMBERS OF THE MONTREAL BRANCH,
CANADIAN MANUFACTURERS' ASSOCIATION.

Your Executive Committee have pleasure in submitting an outline of the work which has been accomplished in the Montreal Branch during the past year, and the questions of interest to manufacturers that have come before them in that period.

Annual Convention, 1904.

The beginning of our year was marked by the holding of the annual convention of the Canadian Manufacturers' Association in Montreal. In many respects it was the largest and most successful annual meeting ever held by the Association, and afforded a splendid opportunity to bring our members and those from other parts of the country into closer relations with one another.

Municipal Affairs.

In municipal affairs one of the principal questions of interest was that relating to the supply of gas. This question was thoroughly taken up by your Executive, and at a joint meeting with the Montreal Board of Trade and the Chambre de Commerce, a resolution was passed that the city should give notice to the Montreal Gas Company, before November 1st, 1904, of its intention to exercise the option to take over the gas plant at an arbitration value, on May 1st, 1905. The resolution also stated that when so acquired the manufacturing plant should be placed in charge of a contracting company, the city retaining control of the distributing equipment only. Your Executive regret that the attempt to secure cheaper gas for the citizens did not meet with the success it deserved.

The opposition to the license fee on electric motors was continued. Alderman Ames, M.P., introduced a resolution in the city council to abolish this fee and when it came up for discussion, the members of the Branch were notified by the Secretary to use influence with their aldermen to have the motion carry.

Your Executive are pleased to report that in consequence a change was made whereby the annual license fee will be collected from establishments using motors, instead of a separate fee for every motor. Further, the license fee was reduced to \$2 on establishments which used only motors of less than 5 h.p., on establishments using larger motors the fee remained at \$5. The committee hope by continual efforts to have the fee abolished next year.

Provincial Legislation.

As usual the committee interested itself in the legislation put forward in the Quebec Parliament, and it is a matter of satisfaction that no measures directly aimed at the manufacturer were passed last session. Two measures, relating to working hours, engaged the serious attention of the committee, and a delegation would have gone to Quebec to oppose their passing had such a course been found necessary.

The objectionable taxes on extra-provincial corporations and joint stock companies, and on non-resident commercial travelers representing foreign businesses, which were passed some time ago, have not escaped the notice of the committee, and the Montreal Branch in conjunction with the rest of the Association will do what it can to have this legislation repealed.

General.

In regard to a number of national questions, the Executive acted in conjunction with the Executive Council at the head office. Such measures as the Union Label Bill and the Alien Labor Bill were not allowed to escape the attention of the committee.

A draft report on the telephone system of the country, along with suggestions for a better service where required, was prepared for the Parliamentary Committee. A modification of the present postal arrangements which would somewhat check the enormous free circulation of American advertising matter, was urged upon the Parliamentary Committee.

Your Executive have received a number of complaints about the slow delivery of express parcels from the Customs Examining Warehouse. Considerable correspondence was entered into, and a special committee waited upon the Collector of Customs and the American Express Company, to see if something could not be done to improve the handling facilities at the Customs Warehouse. Mr. White and the Manager of the American Express Company promised to do what they could to remedy the matter, and the Executive believe that this has been fairly accomplished, although an occasional complaint is still received about the slow delivery of express parcels through the Custom Warehouse.

Technical education was not lost sight of, and the Executive hope that before long Montreal will possess a school capable of training those who are entering industrial establishments.

The Montreal Branch.

Your committee have pleasure in reporting the Montreal Branch to be in a satisfactory condition, both as regards the number of members, and the interest shown in the work of the Association. During the year the membership was increased from 308 to 368, and in a number of special lines the work of the Association has been vigorously prosecuted, particularly in the way of encouraging export trade.

In January, Mr. E. H. Cooper retired from the Secretaryship of the Branch to enter business for himself, after three years of highly satisfactory service to the Association. His resignation was accepted with regret, and a resolution was passed thanking him for his services and expressing the good wishes of the committee for his future success. Mr. Cooper was succeeded in the Secretaryship by Mr. Dakers Cameron.

In addition to the trade sections already formed, the Linseed Oil, White Lead, Paint and Varnish Section came into existence and has proved a new bond of union between the manufacturers of those lines. The Goldsmiths' Section has continued its activities and a number of matters affecting the Manufacturing Grocers have been up before the section of that trade.

A "smoker" held at the St. George's Club House in January, with Mayor Laporte and a number of aldermen as guests, afforded an opportunity to the members to discuss questions of taxation and other municipal problems.

The departure in June of the British Excursion party, including a number of Montreal members, was a unique event in the history of our Association. Your Executive took advantage of the occasion to present an illuminated address to the President, Mr. W. K. George.

An attempt has been made to make the office more of a meeting place for the members, and with this object in view, a number of reference works and pamphlets have been placed on file, including the Canadian Patent Office Record and the United States Consular Reports. A proposal to extend the Montreal Branch to include the district within a radius of 50 miles of the city has been considered, and only now awaits the action of the Executive Council.

Altogether the year has been one of successful endeavor, and your committee are pleased to note that an increasing interest is being shown by the members in the affairs of the Association.

J. J. MCGILL,
Montreal Chairman.

DAKERS CAMERON,
Montreal Secretary.

THE TRADERS BANK OF CANADA

Incorporated by Act of Parliament 1885

CAPITAL SUBSCRIBED - - - - - \$3,000,000
CAPITAL PAID UP - - - - - \$3,000,000
REST - - - - - \$1,100,000

Head Office, - TORONTO

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J. A. M. ALLEY, Inspector

BRANCHES

Arthur, Ont.	Hamilton	Rodney, Ont.
Aylmer	Hamilton, East End	Sarnia
Ayton	Hepworth	Sault Ste. Marie
Beeton	Ingersoll	Schomberg
Blind River	Kincardine	Springfield
Bridgeburg	Lakefield	Stoney Creek
Burlington	Leamington	Stratford
Cargill	Newcastle	Strathroy
Clifford	North Bay	St. Mary's
Drayton	Orillia	Sturgeon Falls
Dutton	Otterville	Sudbury
Elmira	Owen Sound	Thamesford
Elora	Port Hope	Tilsonburg
Embro	Prescott	Tottenham
Glencoe	Ridgeway	Windsor
Grand Valley	Ripley	Winona
Guelph	Rockwood	Woodstock

GREAT BRITAIN—The National Bank of Scotland
NEW YORK AGENTS—The American Exchange National Bank
MONTREAL—The Quebec Bank

THE STANDARD FUEL CO. of TORONTO, LIMITED

Importers **Bituminous**
and
Anthracite Coal
Best Grades Foundry Coke

The question of fuel supply is a most important one to every citizen, but especially to manufacturers. Look out for car shortage, keep your eye on your stock pile, place your orders and secure prompt shipments.

NOEL MARSHALL
PRESIDENT.

Tel. M. 4103

Vol. 23 WINNIPEG—APRIL 3, 1905—VANCOUVER No. 29

Established 1862

THE COMMERCIAL

The WEEKLY FINANCIAL, COMMERCIAL & GENERAL TRADE NEWSPAPER of THE GREAT WEST.

Codville & Co
Wholesale Grocers
Selling of the Celebrated
Gold Standard Teas
Coffee, Baking Powder, and Spices
BANKATYNE AVE. E. WINNIPEG
Telephone BRUNSON and CUMBER

GRANBY Rubbers
Have stood the test for many years
They are the Most Reliable and Best Looking
Sold Only By
The AMES HOLDEN CO. Ltd. Winnipeg
Send for New Granby Catalogue

Men's Furnishings
Neglige and Stiff Front Shirts
Latest Patterns and Materials
FANCY SUMMER VESTS
In Cottons and Colours Yarns
See inside to all sizes
HALF HOSE
Plain, Fancy, Black and Coloured
and Lower Grades in Cotton and Yarns
YIES
In the latest styles from the
English and American
BRACES and BELT
Elastic, adjustable, to suit
all
GREEN'S COLLARS AND
CUFFS
For Men and Women (all sizes)
Hand, One, Stainless, or
Yellow and Colours new and
as receipt of request.
See Ad. Page 5.

ASK FOR
COFFEE
ROYAL SHIELD
Maple Syrup
Campbell Bros. & Wilson
Importers and Wholesale Grocers
WINNIPEG AND CALGARY

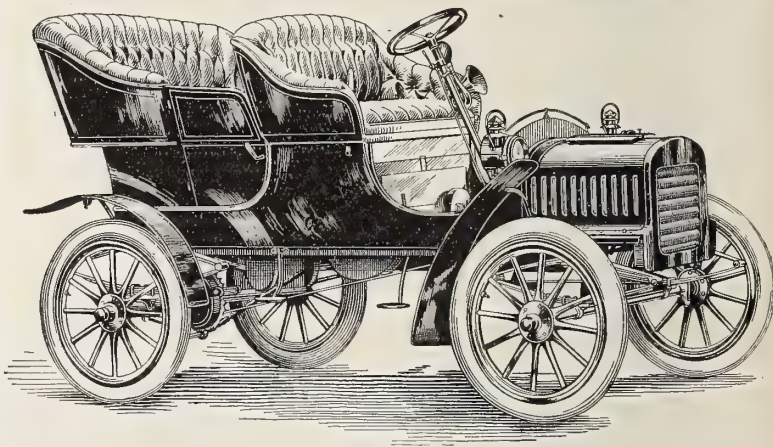
BROMLEY & HAGUE "Lock Brand" Tea
TENTS, AWNINGS, TARPULINS,
HORSE COVERS, FLAGS
Ask for It. Every Pound Guaranteed
382 Princess Street
WINNIPEG

R. J. WHITLA & CO., Limited
WHOLESALE DRY GOODS,
WINNIPEG
STATIONERY
SMALLWARES, NOTIONS
Books, Stationery, etc.
See Ad. Page 5.

Hague
Armington Co.
LIMITED
141 Portage Ave. East, Winnipeg
Manufacturers of
Tents, Awnings, Flags, Wagon
Covers, Stack Covers, Separator
Covers, Bladder Covers, Horse
Covers
Sheds, Overalls, Smocks, Shop-
Coats
See our samples before plac-
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Separate and Standard
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DONT EXPERIMENT JUST BUY A FORD

Fourteen years were spent by Mr. Ford in perfecting what is to-day the most popular car in Canada.

The exclusive features which have brought the famous FORD to its high pinnacle of popularity have been vainly imitated by other cars. Why take chances with experimental machines, while so much value can be had by insisting on the FORD.

Simplicity of construction and operation—power in abundance, and light weight are distinguishing features which make the FORD the most satisfactory car you can buy.

When you purchase a FORD you buy a car that will carry you to the end of the road. Every automobile manufactured at our factory is thoroughly tested out under the personal supervision of Mr. Ford.

Why not buy from a Canadian concern, and avoid custom annoyance? There is still a limited amount of territory for reliable agents.

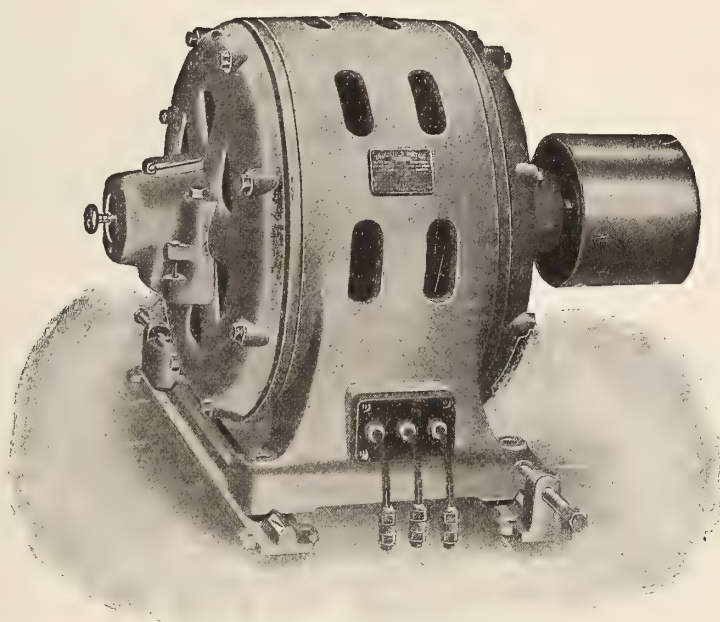
Write us to-day for prices and full information.

The Ford Motor Co. of Canada, Ltd.

WALKERVILLE, ONT.

All Manufacturers Using Electric Power Want a Good Motor

**D. C.
MOTOR
BULLETIN
No. 818**



**A. C.
MOTOR
BULLETIN
No. 822**

C. G. E. Induction Motor.

Our motors are the standard of the world.

Canadian General Electric Co., Limited

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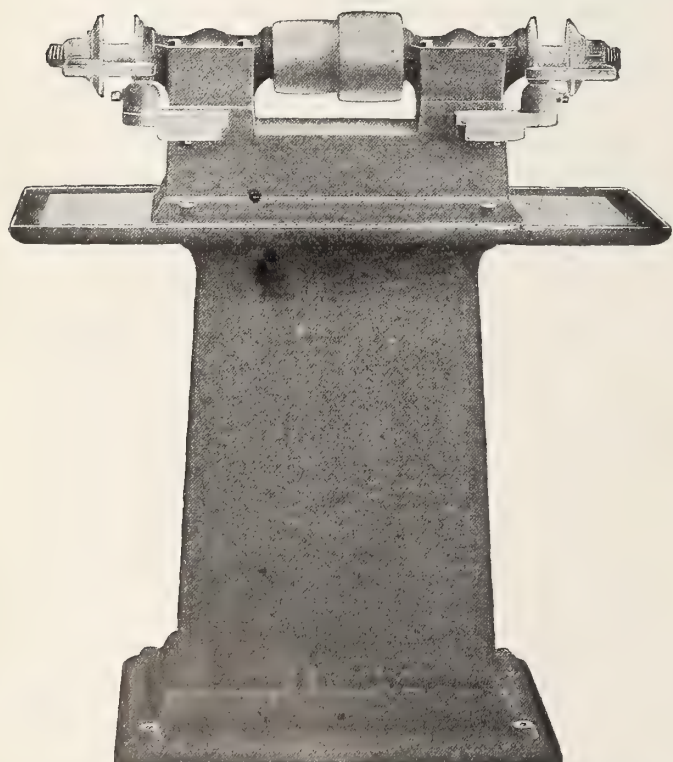


Hart Corundum Wheel Co., Limited

HAMILTON, CANADA

There are still some manufacturers who foolishly persist in using Emery Wheels. Emery is a mechanical admixture of corundum and magnetite or hematite. It is the presence of the corundum in the emery that gives to it its abrasive qualities and makes it of commercial value, and the abrasive efficiency of emeries varies according to the percentage of corundum they contain.

We make a specialty of Craig Mine Crystal Corundum Wheels. Try them once, and you will never order another Emery Wheel.



CYCLONE GRINDER

No. 16

Built on Scientific Principles.
Can be used either on Bench or Pedestal,
with or without Table.
Will carry two wheels, 12 x 3 inches.
Bearings Absolutely Dust Proof.
Fitted with Automatic Oilers.
Countershaft has Cone Pulley, 12 and 13
x 3 1/2 inches.
Tight and Loose Pulleys, 6 in. diam., 4 in.
face, and should run 750 Revolutions
per minute.

Ready for Immediate Delivery.

CATALOGUE AND PRICE LIST ON APPLICATION.

MATCHLESS FIREPROOFING

and Artistic Sheet Metal Building Material

The Temple Building is probably the best example of fireproof construction in America. Every room is a fireproof vault, made so by the use of "Metallic" goods.

"Richardson's" Pressed Metal Doors, copper-plated, 500 in number, are used throughout the building, together with "Metallic" pressed metal door frames and casings.

"Metallic" copper-plated monogram panels with metal dado are used in all the corridors, and copper-plated metal base is used exclusively.

All the interior trimmings of the windows are "Metallic" copper-plated pressed metal, and "Hayes" Metallic Lathing is also used.

The preference displayed by the architect of this splendid building for "Metallic" goods is convincing testimony to their superior merits.



THE TEMPLE BUILDING, TORONTO.
The fireproof home of the Independent Order of Foresters,
in the construction of which \$50,000 worth of
"Metallic" Sheet Metal was used.

The underwriters recommend them as the best fireproofing materials, and the cost of insurance is reduced about one-half when they are employed.

The enormous export trade enjoyed by "Metallic" products is the most conclusive evidence of their universal prestige.

Dr. Oronhyatekha, Supreme Chief Ranger of the I. O. F., writes as follows:—

"I have pleasure in certifying that the steel fireproof doors and door and window trims, as well as the wainscoting, put into the Temple Building, Toronto, have proved eminently satisfactory. They are universally admired for their artistic construction and finish, and are highly commended by representatives of insurance companies. We anticipate a very considerable reduction in the rate of the premiums charged us by such companies by reason of your steel fireproof doors. It seems to me they are a *sine qua non* in every thoroughly fireproof building such as the Temple Building."

PARTIAL LIST OF GOODS MADE BY THE METALLIC ROOFING CO.

"Metallic" Shingles
"Metallic" Tiles
"Metallic" Siding
"Metallic" Awnings
"Metallic" Interiors (Art Finish)
"Metallic" Ceilings
"Metallic" Ventilating Ceiling Centres
"Metallic" Cornices
"Metallic" Wall Designs
"Metallic" Pressed Ornaments and Enrichments
"Metallic" Capitals
"Metallic" Skylights
"Metallic" Ventilators
"Metallic" Lathing—"Hayes" Patent
"Metallic" Fireproof Doors and Shutters

"Metallic" Fronts for Stores and Buildings,
old or new
"Metallic" Fireproof Windows (Wired Glass)
"Metallic" Door and Window Caps
Galvanized Eavetroughs
Galvanized Conductor Pipes

OUR NEW \$10,000 CATALOGUE FREE.

We have just issued the most elaborate, complete and comprehensive catalogue ever offered to the Metal Trade. It is a veritable encyclopædia of all that's practical and beautiful in the art manipulation of Sheet Metal. Book contains 440 pages, superbly bound and illustrated. We send it free, upon request from any builder, contractor or dealer of responsibility.

THE METALLIC ROOFING CO. OF CANADA, LIMITED

MANUFACTURERS - CONTRACTORS - EXPORTERS - - - - - TORONTO, CANADA.

Established 20 years.

Cable Address: "Metallic," Toronto. A. B. C. and Private Codes.

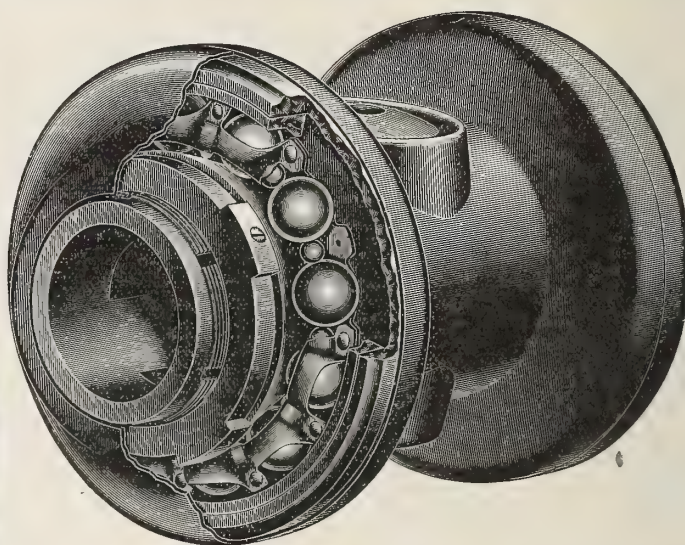
Strict compliance is always given to the peculiar and specific shipping and packing requirements of foreign buyers.

Western Canada Factory: Notre Dame, corner of Monknam St., Winnipeg, Man.

HOW MUCH OF YOUR POWER IS WASTED ?

Over 200 of the leading Canadian factories are equipped with Chapman Double Ball Bearings.

¶ Special Gold Medal awarded to C. H. Chapman by the Superior and International Jury of Awards, at the World's Fair, St. Louis, for distinguished services as the inventor of this bearing. Only two other inventors on this continent were so honored: Thomas A. Edison and George Westinghouse.



¶ During 1895-96 a series of experiments were conducted by Prof. C. H. Benjamin, of Cleveland, Ohio, to determine the ratio of the power required to drive shafting and belts, to the total power consumed, in 12 manufacturing plants on both light and heavy work. ¶ The results were as follows:

Manufacturing Plant Number	Total Horse-Power	Horse-Power to Drive Shafting	Per Cent. to Drive Shafting	Manufacturing Plant Number	Total Horse-Power	Horse-Power to Drive Shafting	Per Cent. to Drive Shafting
1.....	400	157	39.2	7.....	40.4	20.7	51.2
2.....	74	57	77	8.....	74.3	40	53.8
3.....	38.6	25.3	65.6	9.....	47.2	24.5	51.8
4.....	59.2	47.9	80.7	10.....	190	108	56.9
5.....	112	64	57	11.....	107	74.5	69.7
6.....	168	91	54.2	12..	241	114	47.3
Average, heavy machine work.	.....	.....	62.3	Average, light machine work.	.....	.....	55.1

We guarantee you a saving of **75%** of shaft friction.

Send for catalogues and letters from manufacturers who have them in use.

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These Shops Heated with Fan System.

Economical to install, as first cost is lower than any other system of equal capacity.

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Dodge on Bearings!

WE claim that a great many of the statements being circulated as to the loss of power through the use of the "ordinary" bearings are, to say the least, extravagant. We believe there are many power users wasting power through non-alignment and poor millwrighting; but the idea of a total horse power of 400, and using 157 h.p. of same to drive the shafting, seems to us to be ridiculous on the face of it, and suggests at once a change in management. We make the statement that shafting, properly erected in babbited bearings of proper design, should not consume in excess of 10 to 15 per cent. of the power of the engine, and when it does exceed this amount, that the loss may be reduced, not by changing the style of bearings, but by lining up the shafting, and having the plant looked over by a competent millwright or engineer. Power users should remember when considering savings reported to have been made through the use of this or that "bearing," that these statements should be qualified; that is to say, when it is pointed out that "'A' was using 50 h.p. of his 100 h.p. engine to drive his shafting, and by adopting 'our' bearings reduced his loss by 75 per cent." The inference is intended that it was because of the style of bearings used that the high percentage of loss occurred; but, fortunately, most power users are sufficiently well posted to conclude as to what percentage of the loss to charge to journal friction and what to other conditions which may be remedied without disturbing the "Bearings." Some are not posted!

Our Engineering Department is at the disposal of power users, and will be glad to advise with those interested in their possible power loss through journal friction.

CORRESPONDENCE INVITED

DODGE MFG. CO.,

Power Transmission
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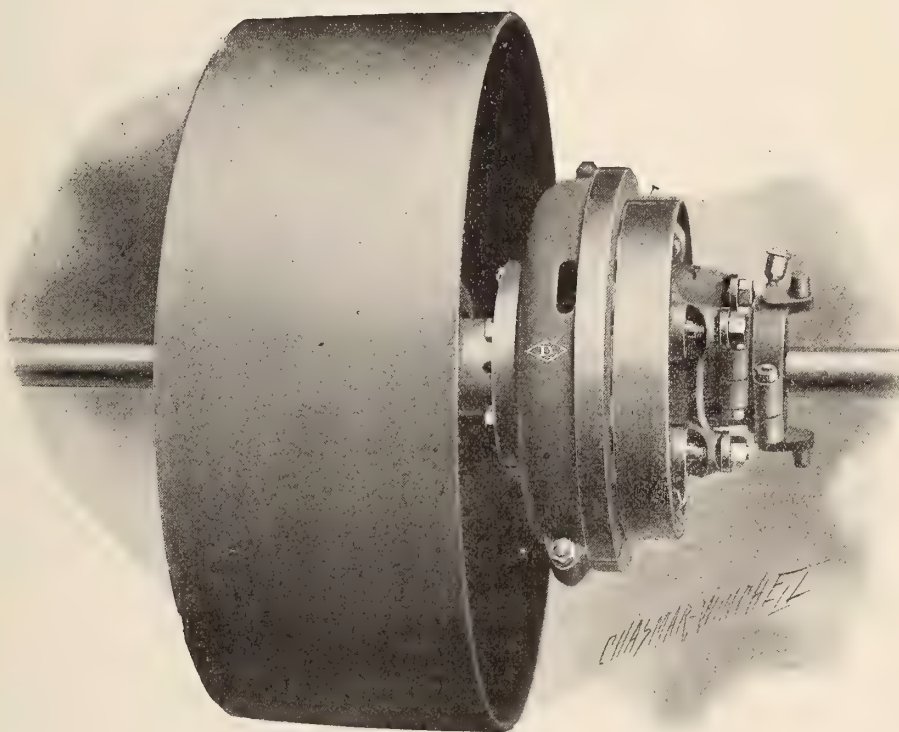
SPLIT FRICTION CLUTCH PULLEY AND FRICTION CUT-OFF COUPLING

Will stop
or start
a machine
or line of
shafting
instantly
by simply
shifting
the lever.

No more
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Belts.

It is a
Dangerous
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Clutch
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The above goods are put up in attractive lithographed packages.

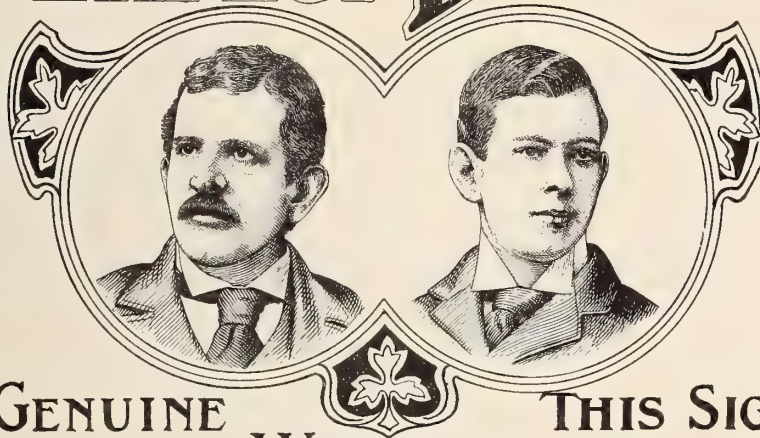
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Geo. H. Pedlar

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Not affected by vibration or sulphur fumes or steam.

Manufactured from best wool felt and does not contain any pitch, tar or asphaltum.

Can be applied to flat or sloping roofs.

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1 Ply	Per	108	Square	Feet	-	-	-	\$2.00
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Price includes sufficient Nails, Caps and Cement for applying, and are packed in centre of each roll.

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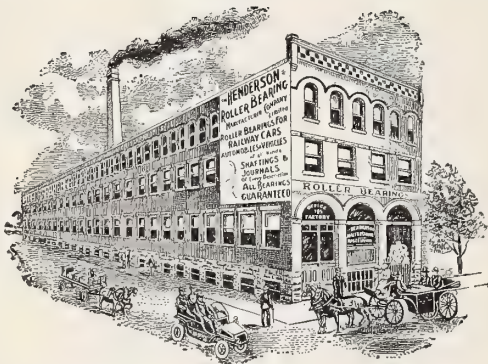
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AS PROVEN BY THE FOLLOWING :

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GENTLEMEN,—*Re Working of Bearings on Freight Car.* Your Roller Bearings have been in operation on our heaviest car since shipment of trucks to us some ten months ago, and are giving perfect satisfaction. We find on examination the condition of the Bearings is as good as when they were installed. We have placed them on our heavy freight car so as to give them the severest test possible on our system. The length of our freight car is 58ft., weighs about 15 tons, and carries from 15 to 18 tons of freight, running over 108 miles daily.

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Judging from results up to date the Bearings will not require renewing for years. We expect to have all our heavy cars equipped as soon as possible.

Yours truly,

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 GEO. E. WALKER, Manager.

THE GRAND VALLEY ELECTRIC R.R. have several cars already in use, and expect to equip throughout their whole system. THE TORONTO RAILWAY CO. are now using them and are delighted with them.

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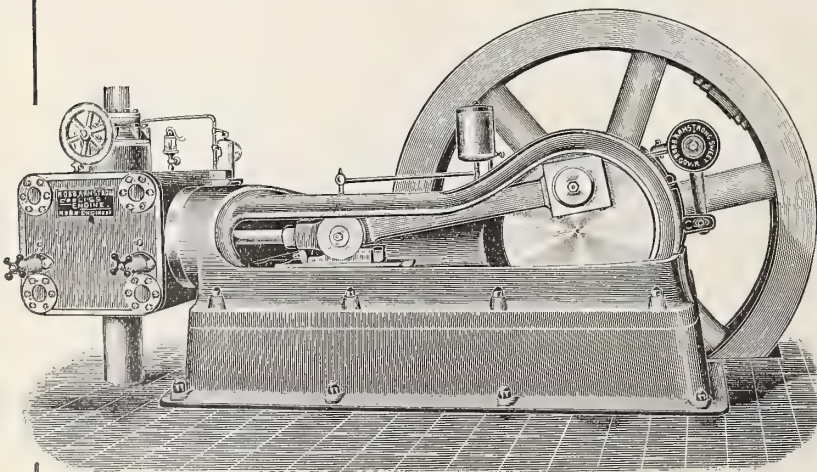
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Let us quote on your requirements in this line.

We are just issuing a new Catalogue of these engines and will be pleased to mail a copy to anyone interested

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A FINE STEAM PLANT.



"I will say without qualification that it is as fine a boiler and engine plant as I have ever had the pleasure of seeing for its size. The engine was working without heating and absolutely without any noise. I wish to congratulate you on your success in building this class of engine, and hope that we may have pleasure in dealing with you again."

The above refers to a 350 horse power Robb-Armstrong Corliss engine and two 175 horse power Robb-Mumford boilers installed by us.

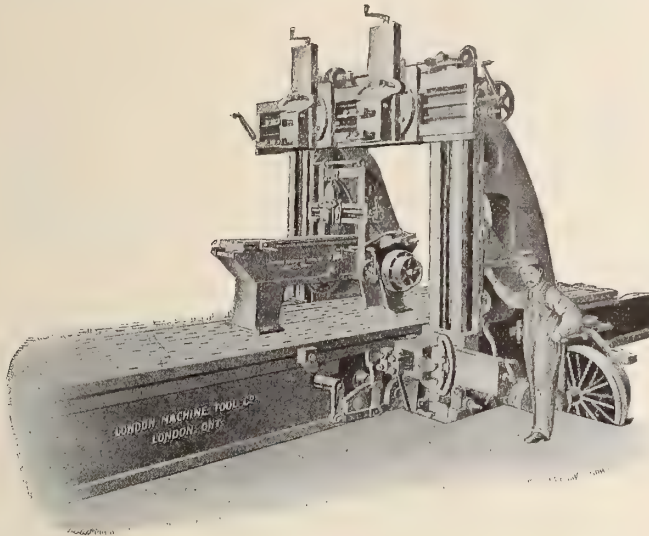
Robb Engineering Co., Ltd., Amherst, N.S.

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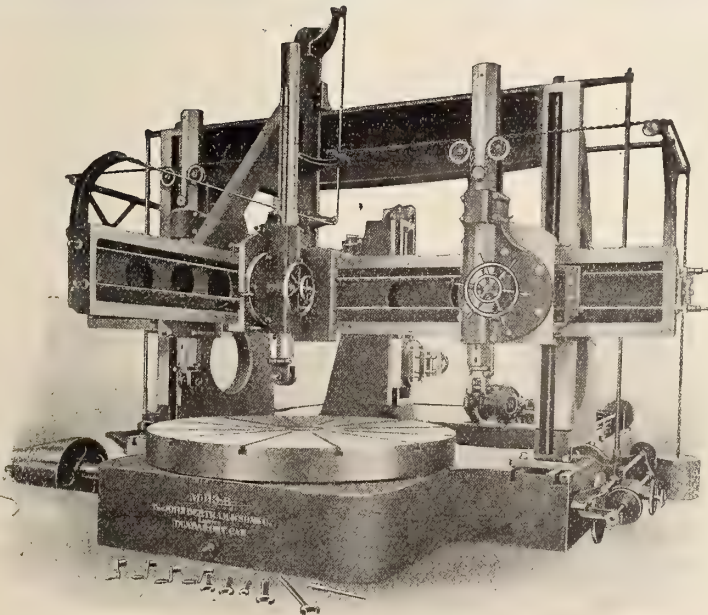
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With rear housing and front extension arm, specially designed for turning and boring large diameters. As shown in the illustration this machine admits 12 feet 4 inches between housings, 6 feet 10 inches under tool holders and 7 feet 4 inches under crossrail, has two turning tools on crossrail, one boring and turning tool on the extended arm and a fourth tool on the back housing. The rear housing is adjusted by power in and out, so that diameters from 16 feet down to 12 feet may be turned. The tool-slide has a vertical feed by power and quick hand adjustment. The housings are moved by power, an auxiliary motor being provided for this purpose and also for elevating the cross-rail.

Photos and Particulars of this or any of our Machine Tools will be sent on request.

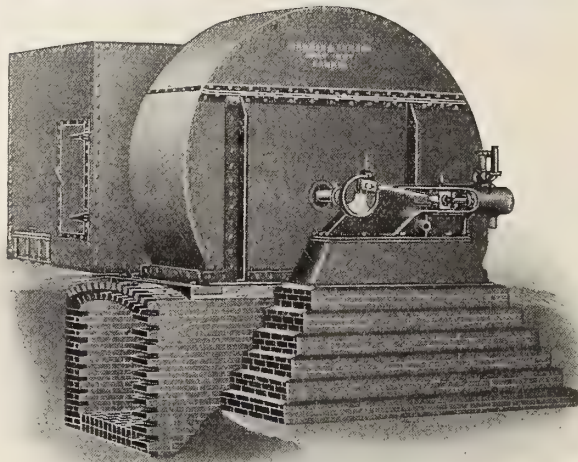
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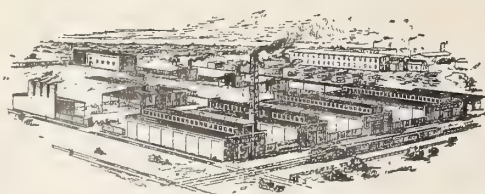
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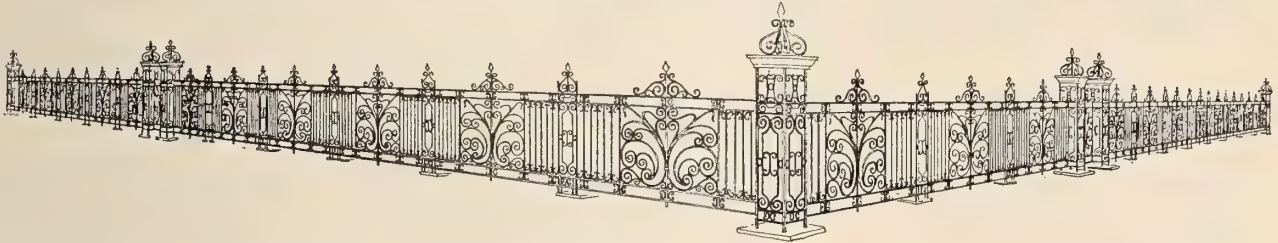


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It looks that way

**The McIntosh Sand-Cement
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and its movable pallet does it

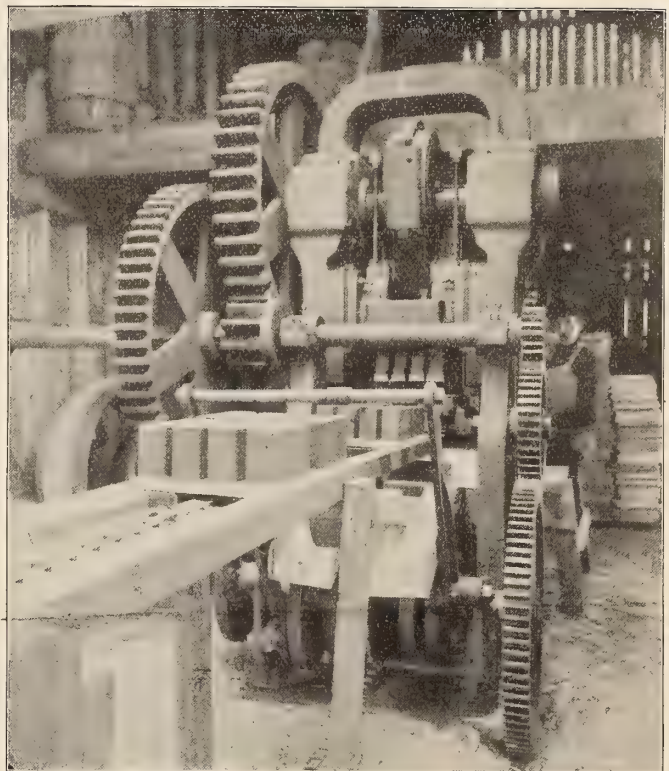
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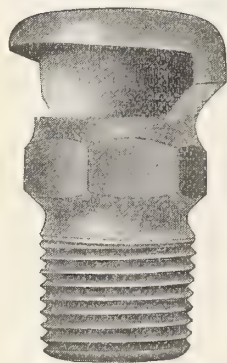
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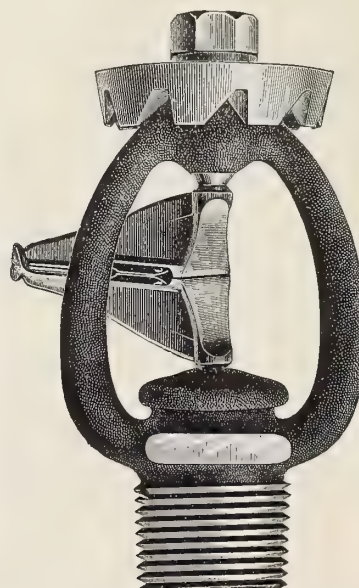
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It will
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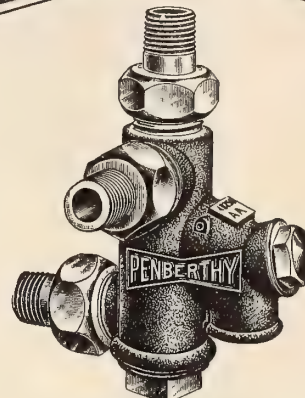
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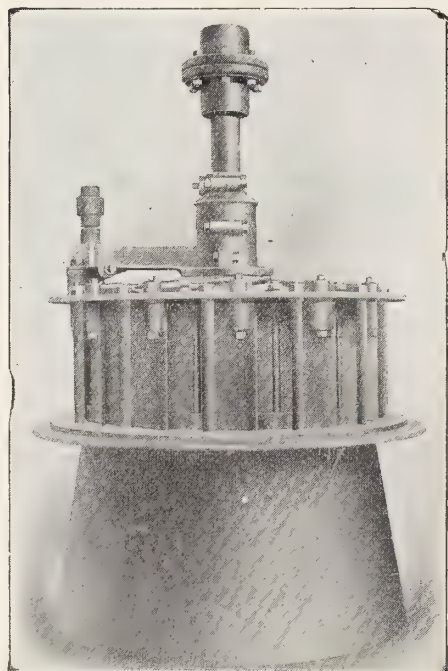
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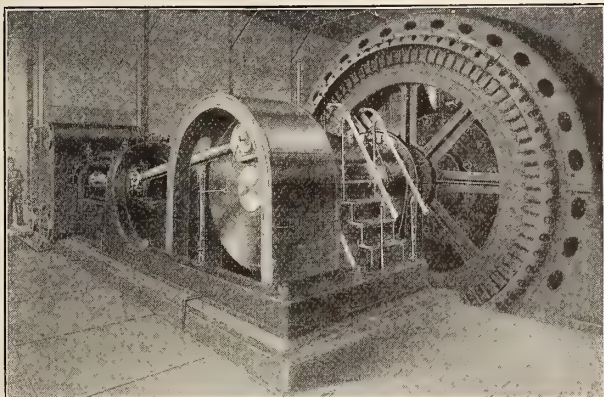
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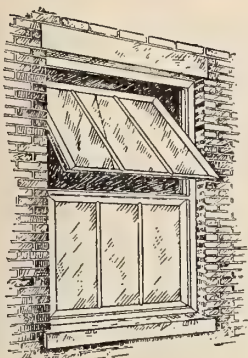
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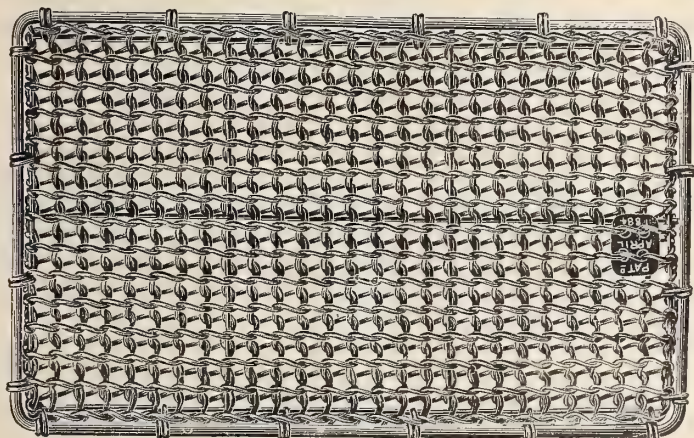
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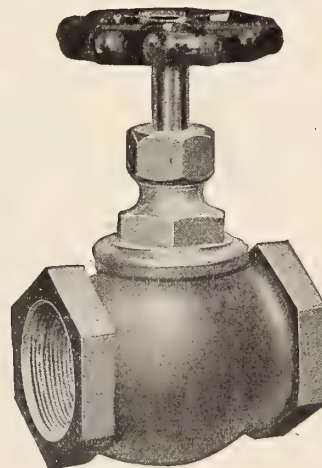


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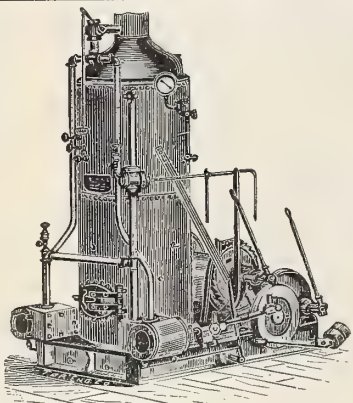
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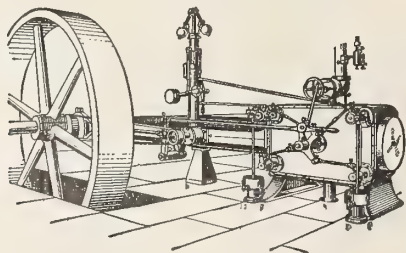
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Vol. 23 WINNIPEG—APRIL 8, 1905—VANCOUVER No. 29

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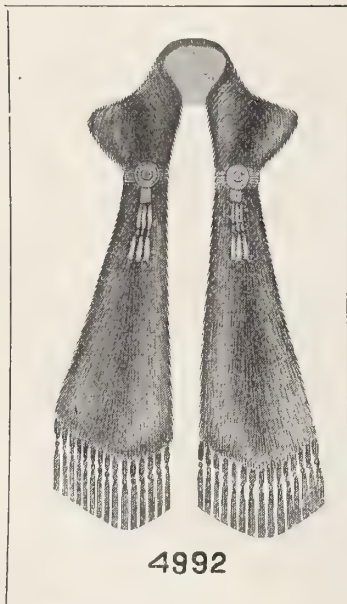
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Vol. VI.

TORONTO, NOVEMBER, 1905.

No 4

INDUSTRIAL CANADA

Issued monthly as the official publication of the Canadian Manufacturers' Association (Incorporated), and devoted to the advancement of the industrial and commercial prosperity of Canada.

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A LOST OPPORTUNITY.

MR. WILLIAM E. CURTIS, a journalist of international repute, has recently concluded an extensive tour of Canada as special correspondent of the *Chicago Record-Herald*. In an interesting series of articles he records his observations upon the social, industrial and commercial conditions of this country as he has found them. Writing from Montreal under date of October 14th, he says:—

"The Congress of the United States has made a great mistake in resisting the reciprocity policy of the Administration toward Canada, for it thereby might have secured control of the markets of the Dominion for American agricultural implements and machinery, iron and steel of all sorts, electrical and steam machinery, textiles, boots and shoes and other wearing apparel, and a long list of other manufactured goods, in exchange for the wheat and a few other agricultural products of the Dominion. No reciprocity treaty is possible now, however. That water has passed over the dam. The opportunity is lost; and although we still command the Canadian markets because of our geographical advantages and the habit our manufacturers have acquired of dumping their surplus products on this side of the border, the development of mechanical industries has been quite rapid over here. Last year the value of the output of Canadian factories exceeded \$650,000,000, and they employed more than 450,000 men. The increase in the output for the year was very large—larger than ever before—

and it will continue to grow under the encouragement of the Government, which has wisely eliminated the tariff from politics and made it a national policy instead of a party issue. While it cannot be said that the people of Canada agree, any more than those of the United States, upon the rates of duty that should be charged upon certain articles, and while the tariff is a local issue here as much as it is there, almost everybody appears to be a protectionist, and the opposition to reciprocity with the United States is becoming active and general."

As further instancing the growth of national Canadian sentiment, he quotes from the address delivered by Mr. C. C. Ballantyne at the annual banquet of the Canadian Manufacturers' Association in Quebec, where Mr. Ballantyne congratulates his colleagues upon the fact that "the old antipathy to goods manufactured in Canada has not only died out, but has been replaced by a decided preference for goods of Canadian make. Not long ago a Canadian merchant would not have cared to proclaim that his goods were of Canadian make; now many make this the chief feature of their advertising, and the improvements in quality have been such that Canadian articles can be shown side by side with imported goods without fear of being set aside in favor of the latter. The products of the factories of Canada are up-to-date and of honest character. The result is a gratifying testimony to the general excellence of Canadian goods, and is likewise a tribute to the far-sightedness of the men who gave Canada a tariff which produced this state of affairs."

Mr. Curtis is a man of bold and fearless expression who believes in calling a spade a spade. He is accustomed to observe closely and to picture things exactly as he has found them. His stay in Canada, while short, has been of sufficient duration to enable him to arrive at an accurate understanding of the attitude of the general public towards this question of reciprocity. Needless to say his remarks will be warmly welcomed by Canadians, whose hope is that they may be given the widest possible publicity among the people for whose edification they were intended.

As INDUSTRIAL CANADA has stated on more than one occasion, reciprocity is dead, absolutely dead. Every newspaper in the country has endeavored to convince the people of the United States of this fact. Our public men, of both political parties, have gone to them and told them to their faces that it was hopeless to attempt to revive it. And yet we still find enterprising Boards of Trade down in the New England States, including among their numbers no doubt some of those manufacturers whose dumping proclivities Mr. Curtis so unblushingly refers to, passing resolutions and urging the Government to re-open negotiations with Canada upon the subject. If more of them could only do as Mr. Curtis has done, come to Canada and see for themselves what the attitude of Canadians towards this question actually is, they would realize how barren of results all such efforts must be.

CHILD LABOR IN ONTARIO.

THE Ontario Factory Inspectors, in their last annual report to the Minister of Agriculture, devote a considerable amount of space to a discussion of the question of child labor. To anyone unfamiliar with industrial conditions in this province their remarks would unfortunately convey the impression that the problem had already begun to assume serious proportions with us. It is true, of course, that in certain European countries the evil has grown to be little less than a national disgrace, and in view of this fact it is well that Canadians should be occasionally reminded of the lamentable results which might follow from lax methods of inspection. At the same time, in the interests of all concerned, it is only fair to state that the employment of children in the workshops and factories of Ontario is exceedingly rare, and that when our vigilant inspectors make suggestions to the department looking to further restrictive legislation in the matter they are prompted by a desire to shield us from a social blight which might some day overtake us, rather than to remedy a condition of affairs already existing.

Ontario has every reason to feel proud of the clean record which her factories can present in the matter of child labor. In only one industry has it developed to a noticeable extent—the canning industry. But here exceptional circumstances come into play, and the Government has recognized the exigencies of the case by passing legislation permitting the employment of children below the age of fourteen years during the months of June, July, August, September and October in such gathering in or other preparation of fruits or vegetables for canning purposes as may be necessary prior to the operation of cooking.

To the employment of children in such occupations the ordinary objections do not apply. The work is done mostly in the open air or in large, well-ventilated sheds. There is a pleasing variety about it which far removes it from the sphere of ordinary drudgery. It is by no means arduous, nor is it done under tension, for it is always paid for by the piece and may be taken up or abandoned at will. Such employment is not calculated to stunt the growth of children in any way. On the contrary it is both pleasurable and invigorating. Moreover, it involves no sacrifice in the way of education, for it is available for the most part only at a time when the schools are closed.

And yet, harmless in itself and legalized by the Ontario statutes, it is surprising to what a limited extent this form of child labor is utilized. One of the women inspectors, who visited several large canning factories at the height of the season last year, states that the greatest number of children she found anywhere was fourteen, and of these only seven were actually working, the rest having been brought to the factory by their mothers simply for the reason that they could not be left at home alone. The total number of hands employed in this establishment was about 200. Another inspector when questioned upon the subject, expressed the belief that child labor in Ontario, while always an insignificant quantity, was actually decreasing. Cannerymen were sometimes glad to make use of it when driven into a tight corner, but at best it was unsatisfactory, and a general tendency was noticeable to do away with it as much as possible by offering a wage which would ensure an adequate supply of adult labor.

So long as our inspectors are able to report as favorably as this with regard to a duly legalized form of child labor there seems little likelihood of prohibited forms making much headway. And, as a fact, apart from the canning industry, child labor is rarely met with. When it does occur, strange to say, the blame is almost invariably to be attached, not to the employer, but to the child's own father or mother. One inspector reports that for the mere pittance that a child can earn he has found some parents willing that it should enter in infancy upon a life of toil, to grow up illiterate, to be stunted physically and dwarfed mentally. Another inspector reports instances where through the loss of the principal bread-winner, it has been necessary for some families to avail themselves of such financial assistance as could be derived from placing children at work in a factory. All refer

to the practice occasionally met with among parents of issuing false certificates of age in order to ensure a child's admission to a workshop. Happily such cases of moral degeneracy or financial misfortune are rare, and it is satisfactory to note that the number of violations of the Act arising from causes of this nature is year by year growing less. As to employers, the common experience of the factory inspectors is that they are both willing and anxious to assist in every possible way in enforcing the regulations with regard to child labor, and their co-operation, so freely given in the past, should effectually protect Canadian society from the shameful abuses which have become so prevalent elsewhere.

In the light of these circumstances it would seem that people who desire to avoid purchasing any article into the manufacture of which child labor has entered, might effectually do so by insisting on goods made in Canada.

COLONIAL TRADE AND IMMIGRATION.

FOR some time past the Labor Government of Australia have been making a determined effort to secure more immigration, particularly from among those who are leaving the Motherland from month to month to seek new homes for themselves in other parts of the world. In this commendable effort, no one more heartily wishes them success than does Canada herself. While it is true that we are openly in the market for the same class of settlers, we are none the less glad to know that there is now to be a new force at work helping to retain within the Empire the many thousands of British emigrants who are every month being lost to foreign countries.

It is unfortunate, however, that Australia's zealous officials should have begun their campaign by circulating statements calculated to belittle the advantages which Canada has to offer. Such conduct, we feel sure, has not met with the approval of her more generous-minded citizens, who no doubt feel most keenly the position in which their country has been placed, and whose influence may be counted upon to check further indiscretions of a similar character. For, after all, Canada and Australia have too much in common to permit of any display of petty jealousy. What injures the one necessarily injures the Empire which both are striving to build up, and they should co-operate upon this question of colonial immigration to the fullest possible extent, rather than that each should seek to advance her individual interest at the expense of the other.

Friendly comparisons of our respective trade and immigration returns are of course at all times interesting and instructive, and from such comparisons we believe that Canada has nothing to fear. Australians refer with pride to the fact that the 1903 returns, which are the latest available, show an external trade per head of population for their country of £22, whereas Canada could show only £17 10s. The following are the figures, expressed in the nearest million:—

1903	Canada.	Australia.
Exports.	£46,000,000	£48,000,000
Imports.	50,000,000	38,000,000
	£96,000,000	£86,000,000

From this it is argued that Australia is the more vigorous country, but it is questionable if such an inference is justified. While her per capita exports may be greatly in excess of Canada's, it should not be forgotten that they are comprised very largely of two articles, wool and gold, which cannot be consumed within her borders. Canada, on the other hand, is a much more self-contained community. Her home market is more valuable to her. During a great part of the year her manufacturers and producers are busily engaged on orders for domestic consumption. It speaks well for the prosperity of her citizens, therefore, that over and above what they buy at home they are still able to absorb imported necessities and luxuries to the extent of £50,000,000 annually.

As regards the growth of population, it is true that any comparison extending over a long or short term of years and terminating not later than 1903 will show a decided advantage in favor of Australia, both in actual numbers and in percentages. But in fairness to Canada some consideration must be given to the geographical situation of the two countries. Until within very recent years, Canada has lost heavily in population to her big and highly protected neighbor to the South, whereas Australia's isolation has served to check the impulse to emigrate which naturally takes possession of working people during a period of depression. What the latter has received, therefore, has been retained; what Canada has received by one door has been pouring out by another.

Latterly, however, conditions in Canada have greatly improved, and she has now no reason to feel dissatisfied with the progress she is making. So far as British emigration is concerned, she is certainly getting a goodly share of it. The following figures, taken from last month's *Board of Trade Labor Gazette* (London) are suggestive:—

British and Irish Passengers.

	Sept. 1904.	Sept. 1905.	9 mos. ending Sept. 1904.	9 mos. ending Sept. 1905.
To British North America.	7,590	7,341	61,541	73,834
To Australia and New Zealand.	2,220	1,880	9,401	9,769

Foreigners and Nationality Not Stated.

To British North America.	1,995	2,143	17,998	21,405
All other British Colonies excepting South Africa.	635	827	3,125	3,517

In addition to the direct emigration to Canada as shown above, in the nine months ending September last, 100,142 British and Irish passengers and 126,953 foreigners purchased tickets from British ports for the United States, many of whom no doubt had for their objective point the Canadian North-West.

These figures indicate a remarkable disparity between emigration to Canada and emigration to Australia. The longer journey and the proportionately higher transportation charges are no doubt a serious handicap to the latter, yet with an average of 11,000 British and Irish emigrants pouring into the United States every month, there should be ample scope for Australian officials in London to do good work on behalf of their country. And as has already been stated, we heartily wish them success. Every British emigrant who settles in the United States not only impoverishes the Empire, but strengthens the hands of her most formidable competitor in trade. Our own and Australia's representatives in England should be made to realize this fact, so that they may co-operate in an earnest effort to divert the tide of British emigration into purely colonial channels.

A WORD FOR TECHNICAL SCHOOLS.

ONE of the striking features that have marked the growth of modern industrialism has been the gradual disappearance of the craftsman and the apprentice. In the olden days the artisan was the proprietor of his own workshop and did practically all his own work. When help was needed it was procured by binding an apprentice for a term of years, the apprentice paying a certain sum of money and the master workman undertaking to instruct him thoroughly in all branches of the trade. The personal contact between teacher and pupil, and the judicious combination of practice and theory which this system afforded were the means of supplying our manufacturing industries with a large staff of well-qualified workmen.

But with the advent of improved machinery, wider markets and keener competition, the old order of things has passed away. The workshop has given place to the factory, the craftsman has

made way for the machine operator, and the apprentice has dropped out of sight altogether. Specialization has become the key-note of success. Changed conditions have demanded that a workman be kept at one particular kind of work until he becomes little better than an automatic machine. He has no opportunity to familiarize himself with other processes involved in the manufacture of the article upon which he is engaged, or to study the relation of the various processes one with another. There is, consequently, no opportunity for talent to develop or for ability to rise.

Where, then, is the training ground from which we are to recruit our department foremen, our factory superintendents and the men who are to guide and direct the practical side of our national industries? There is none. A rather startling admission it will be said, and yet it is one which is absolutely justified by the facts. The skilled help problem is rapidly becoming the most serious problem which the manufacturer is called upon to contend with. He has been compelled to import, and to import freely, and in tracing back to the source of supply he has invariably found that assistance has come from those countries where technical education has reached a high stage of development.

Both capital and labor have been quick to recognize this defect in modern industrial methods and have joined hands in asking the Dominion Government to appoint a commission which will report upon the best means of establishing a comprehensive system of national technical schools. If Canada is to hold her own in the industrial contest which is now being waged by the great nations of the world, she must apply herself immediately and with vigor to the solution of this problem of technical education. Germany has recognized its important bearing on her commercial and industrial welfare by placing it under the direction of the Department of Trade and Commerce. Returns to hand for 1903 show that in that year England and Wales expended \$6,000,000 on technical schools. In 1904 there is said to have been collected in the city of Montreal alone, by United States correspondence schools, the sum of \$100,000. The more ambitious among our young workmen are evidently determined to obtain an education even in the face of difficulties. Our employers may be said to be equally determined to obtain educated and practical workmen. How long are both to be dependent upon the facilities provided by Canada's competitors in trade? The need is a crying one, and it is sincerely hoped that the government will realize its responsibilities in the matter.

THE DEATH KNELL OF THE BOYCOTT.

THE epoch-marking struggle between the Metallic Roofing Company and the Amalgamated Sheet Metal Workers' Association, which for more than three years has dragged its weary length from court to court, has at last been virtually settled. The plaintiff company have been awarded damages by the jury to the amount of \$7,500, and the defendant unionists have been enjoined from ever again interfering with the business of the plaintiffs in any way, shape or form.

It is probably no exaggeration to say that this is the most important action against a labor union ever fought out through the Canadian courts. From first to last the company have had to plough their way through new legal ground, where there has been no statute to define and few precedents to guide. The points which they have succeeded in establishing, therefore, are new points, and will themselves be the standards whereby the merits of future litigation of this kind will be gauged.

Of these points two are of outstanding importance. The first defines the proper manner of entering suit against an unincorporated union to be by means of a representative action, wherein the officers or others whom the plaintiff may indicate are made to represent not only themselves but every member of the union with which they are connected, the judgment of course being equally binding upon all. The second establishes the fact that the in-

dividual members of an unincorporated union are amenable to the law for the misdeeds committed by their officers or fellow-members in the name of the union, and can be made to pay for injuries sustained as a result of their actions.

Two new links have thus been forged in the chain of precedent which is helping to bind down all would-be irresponsible trade unions to something like their normal responsibilities. Heretofore the difficulty has been to take action against bodies which were not legal entities, which had no status in the eyes of the law. The unions themselves, realizing the protection which the peculiar nature of their organization afforded them, have steadily refused to incorporate, and with every new success have been emboldened to fresh acts of violence and coercion. But their very successes have been the means of accomplishing their downfall. Intoxicated by their apparent victories they have attempted to impose conditions that were absolutely intolerable, with the inevitable result that they have been made to answer for their misdeeds before the bar of justice.

The award of the jury in the present instance is certain to exercise a beneficial influence in restraining further excesses on the part of trade unionists. These industrial highwaymen have learned the lesson that they can no longer held their employers up at the pistol point and order them to stand and deliver without themselves being called upon to suffer the consequences provided by the law in such cases. Possibly the irresponsible stripping who has nothing which can be seized to satisfy a claim, or the well-fed delegate who can watch the trouble from a safe distance, may still be anxious to continue upon a career of lawless extravagance, but the time has come when the sober mechanic, who has a home with wife and little ones to provide for, is going to have a say in the management of union affairs. He is the one who must ultimately pay the price of the union's folly, and he is the one to whom the employers may now look for assistance in restoring industrial peace and harmony.

For establishing these results the Metallic Roofing Company are deserving of no small amount of credit. Their plucky determination in the face of difficulties and their unselfish devotion to the cause of justice are greatly to be commended. Personally they stood to gain nothing by the fight. So far as the open shop was concerned, the victory was soon theirs. Any damages which they might hope to recover for injuries sustained through the boycott were sure to be more than swallowed up in expensive litigation. And yet, in order that the legal responsibility of trades unions might be settled once and for all, they decided to fight, and to fight to a finish. The results speak for themselves. Every employer of labor, and every free workman in this or any other union-infested country, is equally a sharer in the victory which has been achieved, and by all such, we feel sure, the Metallic Roofing Company will be most warmly and sincerely thanked.

MIXED CARLOADS.

ELSEWHERE in this issue will be found a complete review of the argument advanced by the Canadian Manufacturers' Association in support of its application to the Board of Railway Commissioners for an extension of the mixed carload privileges to points west of Port Arthur.

In declining to recede from the position which they have taken, the Association wish to disclaim any desire to attack individual interests. Unfortunately the western jobber has made it a personal matter, believing, no doubt, that the step was taken with a view to eliminating him from the field so as to allow for the direct transaction of business between the producer and the retailer. We are glad to be able to state that this is not the case. On the contrary, it will be generally found that easterners sympathize with the western jobber. They realize the difficulties he has to contend with in doing business in a country where credits are necessarily long and frequently risky. They fully appreciate the valuable services he has performed, and will continue to perform,

in pioneering this market for them, and they have no desire to embarrass him in any way whatsoever.

Nor do they believe that the step which they have taken is going to jeopardize his interests. What they are advocating is not the privilege to mix indiscriminately, but only to consolidate into one car such commodities as bear an individual carload rating. Most kinds of dry goods have not a carload rating in the classification, neither have boots and shoes, and under the rule whose restoration the Association is asking for, these commodities could not be shipped in the same car with hardware and groceries. In other words, they only ask for the restoration of the conditions which obtained prior to May, 1903, and under which the western jobber built up the business he is enjoying to-day.

The manufacturers base their application for a restoration of these conditions on the ground that the present regulations discriminate between commodities, between shippers and between localities. They have shown that this discrimination is not merely theoretical, but is every day working to the serious detriment of those who are disadvantaged by it. It has followed as a natural consequence from the action of the railways in conceding the mixing privileges to articles which they have arbitrarily designated as constituting one line of trade. If modern commercialism were such a simple thing that it could be carved up into pieces and labelled, like so many botanical specimens, then such a practice might be feasible, but unfortunately our industrial and mercantile systems do not lend themselves to such exact classification and sub-division. What may have originally been distinct and separate lines of trade have long since outgrown their narrow limitations; they have extended their branches in all directions, overlapping and interweaving to such an extent that disintegration is no longer possible. To grant the mixing privilege upon such a basis, therefore, is to recognize a principle which is obsolete.

Either one of two things is possible under the circumstances: extend the privilege and make its application as wide as possible, or else cut it off altogether. There should be no halfway measures in a matter of this kind. To make exceptions is to discriminate, and to refuse to make more exceptions is to place arbitrary limits upon lines of trade. The former course is advocated as being the more practical one, and the one which will work out to the best interest of the railways, the shippers and the consuming public.

In commending our argument to the careful consideration of those who may have interested themselves in the subject, we desire that they should view the matter broadly, without regard to the various questions of sentiment with which it has been surrounded. The problem is undoubtedly a serious one—one upon which we cannot afford to hold narrow or selfish opinions. While it is right that we should look closely to our individual interests, it is also right that we should pay due regard to the rights of all our fellow-shippers, and our first duty is to adopt such action as will best conserve our common welfare. This can only be done by standing out for the principle of fair and impartial treatment for all, by abolishing class privileges, and substituting therefor common rights.

NOTICE TO ADVERTISERS.

Commencing with the January number, an effort will be made to have *Industrial Canada* appear promptly on the first of each month. To permit of this being done, change of copy for advertising matter will require to be in our hands not later than the 18th of the month before. Advertisers will kindly bear this fact in mind and be governed accordingly.

EXECUTIVE COUNCIL.

OCTOBER MEETING.

A Record Attendance to greet President Ballantyne—The Mixed Carload Question receives a further airing—New Secretaries appointed for British Columbia and Nova Scotia—Large Increase in Membership—Annual Meeting Business disposed of.

The first regular meeting of the new Executive Council of the Canadian Manufacturers' Association was held in the Council Chamber, Board of Trade Building, Toronto, on Thursday, October 19th, 1905. Promptly at 2.15 p.m., the President, Mr. C. C. Ballantyne took the chair. The following members of the Council were present:—Messrs. W. S. Alley (Toronto), F. Birks (Montreal), Geo. Booth (Toronto), W. C. Breckenridge (Hamilton), P. H. Burton (Toronto), C. N. Candee (Toronto), H. Cockshutt (Brantford), J. S. N. Dougall (Montreal), L. V. Dusseau (Toronto), J. F. Ellis (Toronto), P. W. Ellis (Toronto), Thos. Findley (Toronto), J. Firstbrook (Toronto), H. W. Fleury (Aurora), W. K. George (Toronto), Jas. Goldie (Guelph), Lloyd Harris (Brantford), S. R. Hart (Toronto), E. G. Henderson (Windsor), J. Hewton (Kingston), R. Hobson (Hamilton), R. L. Innes (Chatham), W. R. Landon (Chatham), J. B. Maclean (Toronto), Jno. McGill (Montreal), J. S. McKinnon (Toronto), R. McLaughlin (Oshawa), J. P. Murray (Toronto), W. C. Phillips (Toronto), J. A. Publow (Hamilton), J. Ransford (London), Carl Riordan (Merritton), Thos. Roden (Toronto), J. D. Rolland (Montreal), T. A. Russell (Toronto), J. T. Sheridan (Toronto), J. M. Sinclair (Toronto), T. A. Staunton (Toronto), A. W. Thomas (Toronto), Jno. Turnbull (Toronto), F. H. Whitton (Hamilton), R. J. Whyte (Smith's Falls), S. M. Wickett (Toronto), R. C. Wilkins (Montreal), Daniel Wilson (Collingwood).

Mr. P. W. Ellis rose before the meeting opened to congratulate the President upon presiding for the first time over the Executive Council. He assured him of the personal pleasure which the representatives from every Canadian centre of industry experienced in welcoming to the chair a citizen of Montreal and such a representative Canadian business man. Mr. Ballantyne replied briefly, expressing his warmest thanks to the Association for the honor conferred upon him, and specially requesting the co-operation of the members of the Executive Council in carrying out the business of his office during the year.

By unanimous consent the minutes of the last meeting of the Council were taken as read and approved.

Communications.

Communications were received as follows:—

(a) From the following members unable to be present:—W. B. Tindall, Toronto; Geo. E. Drummond, Montreal; Geo. E. Amyot, Quebec; Arthur W. White, London; H. Stroud, Paris; C. H. Waterous, Brantford; J. T. Hagar, Montreal; Ed. Freyseng, Toronto; Wm. Stone, Toronto; A. Saunders, Goderich; R. J. Copeland, Toronto.

(b) From the Secretary of the Manitoba Branch respecting the office of Vice-President for the Province of Manitoba. In presenting this the Secretary also presented the resignation of Mr. E. L. Drewry as Manitoba Vice-President, this gentleman having been unanimously elected to the Chairmanship of the Manitoba Branch for the coming year. On motion of Mr. Booth, seconded by Mr. George, Mr. Drewry's resignation was accepted, and Mr. L. C. McIntyre, of the Paulin-Chambers Co., of Winnipeg, was unanimously appointed as Manitoba Vice-President for the current year.

(c) From Mr. J. O. Thorn calling the attention of the Executive Council to the important exhibition to be held next year in Christchurch, N. Z.

The Secretary stated that the Association had been for some

time in correspondence with the New Zealand Government upon this matter through Mr. Th. de Schryver, their New Zealand correspondent, and that the question had also been taken up with the Minister of Agriculture. The matter was referred to the Commercial Intelligence Committee of the Association.

(d) From Mr. H. C. Spalding, of New York, inviting the attention of the Association to a project for direct water communication between Georgian Bay and Lake Ontario. On motion of Mr. Murray, seconded by Mr. Phillips, this communication was referred to the Transportation Committee.

The reports of officers and committees were then presented as follows, and upon motion were regularly adopted:—

President.

The President delivered a brief inaugural address, urging the earnest co-operation of the members in increasing the membership of the Association and furthering the success of the organization in all its various departments. He laid special emphasis upon the opportunity afforded the manufacturers by the coming tariff revision, and recommended that conflicting interests should be harmonized and unanimous requests sent forward to the Commission. He also expressed his gratification at the large attendance at the first meeting of the Executive Council.

Secretary.

The Secretary reported for the Branches in British Columbia and Nova Scotia.

The former had held an interesting meeting on September 13th, at which Mr. R. H. H. Alexander was recommended for appointment as local Secretary, and a number of other important matters were considered.

The Nova Scotia Branch Executive had met on the 16th inst., and unanimously recommended the appointment of Mr. M. McF. Hall to succeed Mr. J. E. Wood, who had recently resigned. On motion of Mr. Cockshutt, seconded by Mr. Sheridan, these appointments were ratified by the Executive Council.

Treasurer.

Mr. Geo. Booth, the Treasurer, presented his report for the months of August and September.

Finance.

The report of the Finance Committee was presented by Mr. W. K. George. It provided for the regular monthly expenditure and stated that other matters affecting the management of the Association had been held over to be dealt with by the new Finance Committee.

Reception and Membership.

The report of the Reception and Membership Committee was presented by the Chairman, Mr. L. V. Dusseau. It recommended for acceptance 50 applications for membership, the names of which are published in another column. It also stated that the committee would outline at the next meeting plans for a general membership campaign.

Railway and Transportation.

The report of the Railway and Transportation Committee was read by the Manager of the Department, Mr. Marlow. This report covered the work of the Department during the past month dealing with Freight Classification, Demurrage, Pacific Coast Rates, Metallic Shingle Rates, the Export Rate Case, Export Rates via Port of Halifax, the British Columbia Cedar Case, etc. A number of these very important subjects had been discussed by Mr. Marlow with the Board of Railway Commissioners on their

tour through Western Canada, and many of them have been referred to from time to time in the Transportation Column of **INDUSTRIAL CANADA**.

In moving the adoption of the report, Mr. Hobson, the Chairman of the Committee, referred specially to the visit in Eastern Canada of a number of representatives from the jobbing houses of Vancouver and Victoria, asking that the Association withdraw their request for the restoration of former Rule No. 2 in the Canadian Freight Classification, respecting mixed carloads. He stated further that the Association had already placed its case before the Commission and that it was not possible at this date to have



MR. R. HOBSON,

(Hamilton Steel and Iron Co., Ltd.)

Chairman, Railway and Transportation Committee,
1905-06.

it modified in any way. He also stated that nothing had transpired to warrant the Association in changing its attitude upon the question.

The adoption of the report was seconded by Mr. Cockshutt, who supported the action taken by the Committee, and formally endorsed by the Executive Council. The report was adopted as read.

Mr. Marlow presented a letter from the Toronto Bolt and Forging Co., suggesting that the members of the Association had not been given sufficient opportunity to express themselves upon this subject. The President, however, explained that a letter had been forwarded to every member of the Association shortly after the mixed carload rule was withdrawn, inviting their views upon the subject. Reference to the question had also been made from time to time in the columns of **INDUSTRIAL CANADA**, and there was no ground upon which the Association might be criticised in connection with the action it had taken.

A discussion followed in which the following gentlemen took part:—Messrs. J. S. N. Dougall, E. G. Henderson, Thos. Findley, H. Cockshutt, W. C. Phillips, W. R. Landon, R. C. Wilkins and R. J. Whyte.

Insurance Committee.

The report of the Insurance Committee was presented by the Chairman, Mr. P. H. Burton. It reviewed the work of the Department from the time of its inauguration, and announced its officers for the current year as follows:—Chairman, Mr. P. H. Burton; Vice-Chairman, Mr. J. P. Murray; Advisory Committee. Messrs. P. H. Burton, J. P. Murray, P. W. Ellis, W. B. Tindall and A. Jephcott.

Mr. R. M. Bertram having resigned his membership in the Association, Mr. John Firstbrook was elected to serve on the committee in his stead. The report stated that the suggestions made in the Annual Report of the committee were now engaging its attention, and would be dealt with in due course.

Tariff Committee.

In the absence of the Chairman, Mr. McNaught, Mr. W. K. George presented the report of the Tariff Committee. It stated briefly the steps taken by the Association to afford the members an opportunity of acting together to discuss the needs of their various industries before presenting their cases to the Tariff Commission.

Industrial Canada.

The report of the **INDUSTRIAL CANADA** Committee was presented by the Chairman, Mr. T. A. Russell. It contained a number of suggestions respecting the advertising and stated that the paper would appear on the first of each month beginning with the January number.

The new cover design had been well received, and it had been decided to insert alternately cuts of the Provincial Parliament Buildings in Canada and industrial scenes.

Subjects for the biographical sketches to appear in the next six numbers were selected, and suggestions were made respecting special articles for approaching issues.

Branches.

The report of the Montreal Branch was presented by Mr. J. J. McGill. This report appears in another column.

The report of the Toronto Branch was presented by Mr. John Firstbrook. This also appears in another column.

Annual Meeting Business.

Carrying out the decisions of the Annual Meeting a few important matters required the attention of the Executive Council at its first meeting.

It was unanimously agreed that the resolutions adopted at the Convention should be forwarded to the members of the Dominion Cabinet as soon as Parliament should convene.

On motion of Mr. Cockshutt, seconded by Mr. McLaughlin, Messrs. J. F. Ellis, W. B. Tindall and A. W. Thomas were appointed as representatives from the Executive Council on the Finance Committee for the current year.

By unanimous consent the presentation of an acknowledgment to the retiring President was left in the hands of the Finance Committee.

Before the meeting adjourned, Mr. McGill, on behalf of the Montreal Branch, made enquiries concerning the publication of the reports from Montreal in **INDUSTRIAL CANADA**, the issuing of the last membership list, and the representation of Montreal on the standing committees of the Association. These matters were generally discussed to the satisfaction of all concerned.

The meeting then adjourned.

TORONTO BRANCH.

The first meeting of the newly-elected Executive of the Toronto Branch was held on October 12th. Mr. W. B. Tindall, Chairman, presided, and other members present were Messrs. S. B. Brush, Richard A. Donald, Ed. Freyseng, W. K. George, S. R. Hart, R. E. Menzie, J. P. Murray, A. S. Rogers, Frank A. Rolph, J. O. Thorn and R. J. Younge.

The following important matters received attention:—

Ontario Assessment Act.

A communication from Mr. J. P. Murray, pointing out that owing to the high value of property in Ontario cities, the manufacturers in those cities bore a much larger share of the business tax than the manufacturers in similar towns. It was decided that an enquiry should be sent to the members of the Toronto Branch enquiring whether their assessment for this year was in excess of or less than the assessment of last year, and inviting

suggestions with regard to any defects in the operation of the present Act.

South African Memorial.

A letter was presented from the Secretary of the South African Memorial Association asking the co-operation of the Branch in connection with their work. It was decided that a draft resolution endorsing their efforts should be forwarded.

Monthly Dinners.

It was recommended that the Branch should hold a series of monthly dinners during the winter season, and a special committee consisting of Messrs. Freyseng, Brush and Donald were appointed with power to add to their numbers, and with power to act in arranging a definite programme.

Mr. R. S. Gourlay was elected a member of the committee to take the place of Mr. W. H. D. Miller, whose removal to Montreal rendered his resignation necessary.

The applications of seven new members were recommended for acceptance, and also the resignation of three others.

A special committee composed of Messrs. R. A. Donald, F. A. Rolph, R. E. Menzies and A. S. Rogers, was appointed to carry out a membership campaign during the current year.

MONTREAL BRANCH.

The regular monthly meeting of the Montreal Executive Committee was held on October 12th, with the Vice-Chairman, Mr. D. Lorne McGibbon, presiding. There were also present Messrs. C. C. Ballantyne, J. S. N. Dougall, J. J. McGill, Robt. Gardner, S. W. Ewing, W. T. Whitehead, Clarence F. Smith, J. H. Birks, S. S. Boxer and C. W. Davis.

Reports were submitted in regard to the complimentary dinner given by the Montreal Branch to Mr. W. K. George and the delegation which interviewed Hon. J. C. McCorkill about the repeal of the tax on foreign commercial travellers.

Messrs. S. S. Boxer and Wm. Smaill were appointed additional representatives from the Montreal Branch on the Executive Council of the Association. Eight applications for membership were passed.

On October 11th a large delegation, headed by Mr. C. C. Ballantyne, President of the Association, waited upon Hon. J. C. McCorkill, Provincial Treasurer, to request the abolition of the license fee imposed on non-resident commercial travellers representing concerns which have no place of business in Canada. Strong arguments were advanced by the manufacturers for the repeal of this tax. After a lengthy discussion Hon. J. C. McCorkill suggested that a large delegation should be sent by the Association in the following week to lay down their views before the other members of the Provincial Government, a plan which was readily agreed to.

During the month, meetings for tariff purposes were held by the Manufacturing Grocers' Section and the Montreal Linseed Oil, White Lead, Paint and Varnish Section, and manufacturers of leather, brass supplies, silk garments, boots and shoes.

NEW MEMBERS

Passed by the Executive Council, October, 1905.

Armstrong, B.C.

ARMSTRONG SAW MILL—Lumber.

Bayard, B.C.

OTIS STAPLES LUMBER Co.—Lumber.

Berlin, Ont.

PHILIP GIES—Boilers, Steam Engines.

Brampton, Ont.

THE ZENNER DISINFECTANT Co.—Disinfectants.

Brantford, Ont.

CANADA GLUE Co.—Glue.

Dundas, Ont.

THE JOHN BERTRAM & SONS Co.—(Henry Bertram, second Member).

Galt, Ont.

THE GALT ART METAL Co., LIMITED—Metal Ceilings, Shingles, etc.

Goderich, Ont.

THE MCINTOSH BRICK MACHINE Co.—Brick Machinery.

Guelph, Ont.

THE GUELPH STOVE Co., LIMITED—Stoves.

Hanover, Ont.

THE BALL FURNITURE Co., LIMITED—Furniture.

Hamilton, Ont.

THE BROWN BOGGS Co., LIMITED—(J. M. Brown, second Member).

UNION DRAWN STEEL Co.—Steel Shaftings.

Listowel, Ont.

B. F. BROOK—Blankets.

Montreal, Que.

C. H. CATTELLI—Macaroni.

DALY & MORIN—Window Shades.

FREYSENG CORK Co., LIMITED—(Otto Zepf, third Member).

F. GALIBERT—Leather and Gloves.

PAUL LAIR—Gas Engines.

LA PRAIRIE BRICK Co., LIMITED—Brick.

THE MEYER-THOMAS Co.—Cigar and Tobacco Boxes.

THE MONTREAL PACKING Co., LIMITED—Bacon, Hams and Lard.

THE STILENFIT CLOTHING Co.—Ready Made Clothing.

THE SULTANA MANUFACTURING Co.—Blackings and Dressings.

New Glasgow, N.S.

JOHN STEWART—Bridge and Structural Work.

New Westminster, B.C.

THE SCHAAKE MACHINE WORKS—Machinery.

Ottawa, Ont.

THE DOWD MILLING Co.—Flour and Rolled Oats.

Peterboro, Ont.

THE PETERBOROUGH SHOVEL AND TOOL Co.—Shovels.

Quebec, Que.

J. A. ROUSSEAU—Lumber and Matches.

MANICOUGAN & ENGLISH BAY EXPORT Co.—

Sherbrooke, Que.

MAGOG WOOLLEN MILLS—(A. Percy Lomas, second Member).

St. George, Ont.

JACKSON WAGON Co.—Wagons and Sleighs.

Stratford, Ont.

THE BORLAND CARRIAGE Co., LIMITED—Carriages.

Toronto, Ont.

ADAMS BROS.—(F. W. Adams, second Member).

THE CANADIAN SHREDDED WHEAT Co.—Shredded Wheat.

THE CAPEWELL HORSE NAIL Co.—Horse Nails.

GLOBE PRINTING Co.—(Robt. Jaffray, second Member).

INTERNATIONAL VARNISH Co., LIMITED—Varnishes.

PENMAN & SPRANG—Duplicating Machines.

TORONTO BOLT & FORGING Co.—(T. H. Watson, second Member).

THE R. S. WILLIAMS & SONS Co., LIMITED—Musical Instruments.

Vancouver, B.C.

PACIFIC COAST PIPE Co., LIMITED—Water Pipe.

Victoria, B.C.

VANCOUVER PORTLAND CEMENT Co.—Cement.

VICTORIA-PHOENIX BREWING Co., LIMITED—Lager Beer, Ale and Porter.

Walkerton, Ont.

CANADA BOBBIN Co.—Bobbins.

Winnipeg, Man.

BLACKWOODS, LIMITED—Soda Water.

CZERWINSKI BOX Co.—Wooden Boxes.

J. Y. GRIFFIN & Co.—Pork and Beef Packers.

THE IDEAL BEDDING Co.—(J. H. Parkhill, third Member).

NORTHERN IRON WORKS—Iron Works.

G. F. STEPHENS & Co., LIMITED—Paints.

FIRE INSURANCE—IN PERSPECTIVE

By E. P. HEATON

A Paper read before the Toronto Branch, Canadian Manufacturers' Association, November 16th, 1905.

On Dec. 31, 1904, the property, real and personal, of the people of this country was insured against loss by fire in companies licensed to do business in Canada to an amount exceeding sixteen hundred and fifty millions of dollars (actually \$1,657,712,753), and to secure indemnity for losses sustained by fire there was paid in cash by way of premiums to the companies operating under Dominion and Provincial charters nearly nineteen millions of dollars (actually \$18,674,924), or over sixty-two thousand dollars for every working day of the year. Please observe that this statement applies only to the business transacted with licensed companies, for it is impossible to ascertain the amounts paid to the unlicensed companies or to obtain information to justify a guess as to its volume and extent.

Let us not pass over this statement without a due sense of its great importance. The figures are so large as to be almost meaningless even to business men; as a matter of fact who can adequately comprehend what sixteen hundred and fifty millions of dollars really means?

I wish to state this fact deliberately that we may obtain a clearer perception of the importance of fire insurance, for the more fully this is realized the more generally will it be admitted that, considering its importance, there exists a deplorable ignorance of the conditions that touch the subject at every point, and an equally deplorable indifference that is only excusable because of its universality.

The title of the paper I am to open the discussion with, "Fire Insurance; In Perspective," requires explanation. We naturally associate the term "perspective" with art, the delineating of outlines of objects, of their shadows and reflections so that when the picture is viewed the eye is effected in the same manner as it would be by viewing the objects themselves from a given point. We see a painting with a field of gorse in the foreground, trees lining the pathway, a winding river beyond and, at what appears some distance, a mountain scarcely perceptible for the overhanging clouds and mist, and as we look at it we intuitively exclaim "an excellent perspective." Applying the same principles to the treatment of a subject, even one so commonplace as Fire Insurance, we want a sense of appropriate relationship of the parts to one another and to the whole subject, and as stated by Bacon, the great philosopher of the 13th century, "Observe a kind of perspective that one part may cast light upon another."

That will be the course of this paper, and, whilst the proper relationship of one part to another will involve

A Hasty Retrospective Glance,

it will only be to justify criticism of insurance as now conducted and to indicate measures of relief from the burdens from which manufacturers and others from one end of the country to the other are suffering.

Fire Insurance is the offspring of a great calamity. In 1666 the City of London, England, was visited by a conflagration that has had no parallel in times of peace, and compared with which none have wrought the havoc or caused such wide spread devastation and ruin; more than 13,000 buildings were completely obliterated, with a financial loss of over \$50,000,000, and the metropolitan city staggered under the blow.

This calamity set men thinking, and in the year following clubs were started granting insurance not exceeding £500 on a single risk. In the same year one Dr. Barbon (sometimes called Barton) "set up his office for insuring houses and buildings." History does not tell us which first entered the field, the clubs or the Doctor, nor have I suggested them with a view to a claim of precedence; I have stated them merely to record:—

1st. That Fire Insurance had its origin in a basic principle of mutuality; and

2nd. Of Individual Underwriting.

The clubs were mutual insurance concerns, the Doctor's office was his personal business.

Please remember these two statements as you follow me in a chronological record.

In 1680, after 13 years of active business, Dr. Barbon's office merged into "The Fire Office," for some time known as "The Insurance Office at the back side of the Royal Exchange." Twenty-five years later the office changed its name and called itself the "Phenix Office"—this is not the company now known by the same name and which last year celebrated its centenary anniversary of business life in Canada. The present "Phoenix" was established in 1786, but there is no information as to the date of the death of its namesake, whenever that event may have occurred. This is certain, that from 1680 to 1710, a space of thirty years, this was the only Joint Stock Fire Insurance Company in existence, but at some time unknown, for causes unknown, it gave up the struggle and exists but as a memory of an historic fact.

Confirmation of the statement that the original basis of Fire Insurance was found in the principle of mutuality will be shown in the facts now to be hurriedly presented. Bear in mind that individual underwriting and mutual insurance clubs ran side by side for some years as the sole occupants of the field. Just when the clubs ceased to exist is a matter of uncertainty, but evidently as quickly as one succumbed a newer and stronger organization took its place. In 1681 the Corporation of London took a hand in the proceedings and instituted a species of Municipal Insurance, which, however, received its quietus two years later at the hands of the Court of King's Bench. One of the main arguments used at the time in opposition to the corporation scheme was that Fire Insurance was beyond the corporate power of the city, but whether this contention held or not is not material, certain it is that the first scheme of Municipal Insurance had a brief if merry life.

At this early stage the benefit of Fire Insurance was fully realized, and consequently at the demise of the scheme of the Corporation of London there was started in 1683 the Friendly Society, and I quote one rule from the prospectus of this institution which is of much interest to us to-day: "That every member shall contribute toward the making good such losses as shall happen . . . provided that no person be charged for any one loss above 30 shillings for one hundred pounds on brick houses and double on timber houses"—a very clear and succinct definition of mutual insurance and of the liability that attached to it. Under the scheme of this society the original rate charged on the acceptance of a proposal was (and for convenience I use the equivalents in present day Canadian currency) 6½c. per \$100 on brick and 13c. per \$100 on timber houses, but each proposer had to deposit a guarantee of 33c. per \$100 on brick and 66c. on timber houses, the cash payment being one-fifth of the guarantee, and this is precisely the ratio that is in almost universal practice to-day, on this continent. In other words, for over 200 years, mutual underwriters have maintained the fixed basis of 5 to 1, a testimony to the good judgment of the pioneers in laying the foundations of the business.

The year 1683 stands out prominently as the year in which the great system of Mutual Fire Insurance Associations was established.

In 1696, 13 years later, the Hand in Hand Company was established, and in 1717 the Westminster. Both of these were started as purely mutual companies, although the Westminster at a subsequent date diverged into two classes—members who were liable for the losses and entitled to the profits, and those who had no responsibility of partnership. These two concerns for over 200 years have stood in the glare of public opinion, have passed through trials and ordeals beyond number, and yet, sad to relate, for reasons that are not understood on this continent, both have

this year succumbed to the tempting offers of Joint Stock Fire Insurance Companies, and both are now numbered among the "great has beens." The history and record of these two offices constitute a wonderful chapter in the history of Fire Insurance and might reasonably form the subject of a much more extended reference than I can possibly give to it now. Their history is a romance, whilst the singularity of their demise might fittingly find expression at the hands of a more capable writer.

The pronounced success of the mutual companies naturally invited emulation from a horde of crafty speculators who wished to divert the profits from the participating policyholders to the few favored individuals, and it is not surprising, therefore, that in 1710 a co-partnership of 24 persons established the Sun Fire Office on proprietary principles. As an evidence of its early success let me state that the shares originally costing \$100, held by twenty-four co-partners, were valued in 1713 at \$300; in 1714 at \$875; in 1715 at \$2,500, and in 1720 a share was sold for \$5,000. Thus did a practical monopoly thrive.

The reign of Queen Anne produced several schemes of Fire Insurance showing how the system was taking hold of the business community. In 1714 the Union Assurance Society was established on the basis of "mutual and equal advantage to all," but in 1805 this company joined the ranks of the Joint Stock Institutions.

The number and extent of insurance and other schemes foisted on the British public between the years 1717 and 1720 caused the passage in the latter year of a bill commonly dominated the "Bubble Act," which effectually stopped the period of extended speculation. Out of it, however, grew the formation of the Royal Exchange and London Assurance Corporation as marine companies, whose charters date from the year 1720, but both companies a year later obtained supplemental powers to transact fire and life business.

Whilst the Bubble Act was designed to prevent the British public being gulled by such extravaganzas as the South Sea Bubble and kindred swindles in the fire insurance world, it is worthy of note that the sentiment of the day demanded the reservation of the right of individual underwriting, and there is no question but that Lloyds, this now great organization, transacted fire insurance under this plan in addition to their primary function of marine insurance.

If what I have so far submitted demonstrates anything I think it clearly establishes that for the first one hundred years the principles of mutuality and individual underwriting were the conspicuous and predominating features of the subject we are discussing.

Insurance in the American Colony.

"Coming event cast their shadows before them," and it is not surprising that the early history of fire insurance in Britain repeated itself in the American colony. It is not easy to obtain reliable data as to the organization and progress of fire insurance in the colony, but it is said the first insurance office in America was opened in Boston in 1724, and from all accounts this was operated by and for individual underwriting. 1752 saw the establishment of the "Philadelphia Contributorship," an association on unquestioned and pre-eminent mutual principles. Two unique facts in connection with this association are worthy of notice. In 1783 the association sustained a loss by a house becoming ignited from its shade trees, and promptly they refused any longer to insure houses with shade trees. A number of members seceded and in 1784 formed the Mutual Assurance Company, but even they charged an additional rate for houses having shade trees. One of the policy conditions provided that trees planted after the insurance was made must be reported to the company and the additional deposit paid, or "the deposit money will be forfeited and the insurance become void." This is about as vexatious and absurd a condition as many that find a place in the documents of modern companies.

The second fact in connection with the Philadelphia Contributorship, not generally known in this country, is that they now only issue perpetual insurance policies, one premium or deposit only being made. The cost of insurance in this association, which

has a very extensive business in its native city, is nothing more than the interest on the initial deposit, the principal being always at the option and disposition of the assured.

In 1787 the Mutual Assurance Company of the City of New York was formed and remained the only native organization until 1796. In 1809 it became incorporated as a joint stock company, its name was changed to the Knickerbocker in 1846, and in 1890 it passed out of existence.

As a last historic fact I may mention that 1794 saw the formation of the two first insurance companies on joint stock principles in America, Philadelphia again being the birth-place; both are in existence to-day, and one is well represented in the Dominion.

To trace the course of events in years subsequent to the 18th century (for that is where we stay our hand in matters of historic value) would be interesting, but I am afraid it would add little if anything of practical importance or assistance. It would also be interesting to compare the comparative growth of mutual and joint stock insurance, to trace the ups and downs of both, but having quoted enough to demonstrate the truth of my statement as to the basic principle of fire insurance, in its origin, it is perhaps superfluous to add further matter, however interesting, on that point.

"In perspective" this statement now naturally asserts itself:

"A Certain Element of Mutuality Exists in All Companies."

This must be so by the very nature of things, and no people of this or any other country have had this fact hammered into them more persistently than have our manufacturers by the representatives of what are now called "old line," but which in reality, as I have shown, are "new line" companies. No one fact has been more distinct and emphatically asserted than that the companies must obtain from the insuring public enough money to pay losses, expenses, dividends, and to provide the necessary reserve fund to run off the risks on their books. The method adopted by the companies in recent years to obtain the money required for these purposes is well known to you all, and no room is left for doubt that, as far as premiums are concerned, the principle of mutuality defined in the good old adage "bear one another's burdens" has been applied unsparingly and with an eminent disregard for all considerations of justice or equity. Why one having property to insure located in an absolutely isolated and unendangered position should be called upon to contribute a largely increased premium under a class of risk that even the insurance companies do not claim has been unprofitable, because a Toronto conflagration has entailed the payment of large sums hitherto unprovided for, is one of those things beyond the comprehension of ordinary mortals. Homely truths are sometimes emphasized by concrete illustrations and I cannot do better than cite a case that has come under my own observation. In a city over 100 miles from Toronto I found one of the members of our Association smarting under the enforced additional annual expenditure of \$325 because of the Toronto fire. His risk was completely isolated, beyond the remotest possibility of conflagration; up to the Toronto fire his insurance premiums amounted to \$853 per annum; after the Toronto fire he paid \$1,183, an increase of 40%, for what? "Mutuality as to premium liability only." But so palpably unjust was this surcharge or tax, that during the present year, upon full inspection, and presumably upon full consideration of all matters and things connected with his class of risk in general and his own individual risk in particular, with all the record of disaster and loss that has been dinned into our ears, "as shown by the Government Blue Book," his premium, without the slightest change in property or risk, was reduced to \$928. If an imposition of \$325 was reasonable and just when made, what causes contributed within a twelve months to its practical removal? We can reach no other conclusion than that for the year 1904-05 the assured, in the case I have cited, contributed, involuntarily, of course, the sum of \$325 to the insurance companies to help to recoup them for losses sustained in another city over one hundred miles distant. And if this is

not carrying mutual obligations, as to premiums, to an extreme, I am at a loss to find a term to apply to it.

It must be frankly stated, however, that mutuality in joint stock companies begins and ends with the obligations of the insured. Commercialism then steps in and takes the place of equality, the key stone of mutualism; thenceforward the interest of the insured is subservient to that of the stockholder and the one



MR. E. P. HEATON,

Manager Insurance Department, Canadian Manufacturers' Association.

and only concern and consideration becomes the profit the business will yield to those whose money is invested in the enterprise.

We hear much in these days of the advantage of curbing the dividends allowed to be paid to stockholders of public utility companies and if fire insurance companies could be included in this category by which the rate of dividend would be limited to a fixed, even if a most generous, percentage, I venture to assert the premium burdens of the insured would be materially lightened.

"In perspective" let me now speak of the

Effect of Commercialism Upon Joint Stock Fire Insurance Companies.

Shall I be touching on dangerous or treacherous ground in discussing this feature? Doubtless I shall be censured for so doing, but if I am to properly present the subject to you, and to those who may subsequently read this paper I fear I cannot avoid expressing such thoughts as will help us to understand the situation from every point of view. Let it be understood that I am not actuated by any animus, nor have I any ulterior motive to serve in presenting what I am now about to lay before you, but in the completed picture place must be found for it.

I have already indicated to you that the first organized stock company showed such fabulous results as to warrant a \$100 share changing hands within ten years at \$5,000, a gold mine indeed! This company in 1904 with a capital of six hundred thousand dollars paid a dividend of \$570,000, or 95%. Noting this fact I have dug up some other facts that I will try to present to you in a manner unoffensive to all.

Last year was a particularly bad year in the United States and Canada, owing principally to the Baltimore and Toronto disasters, yet from a statement published in the Insurance Chronicle of Montreal in their Issue of Nov. 3rd last I find 17 British offices licensed to do business in Canada (16 also being represented in the United States) paid dividends to shareholders amounting to

over \$9,000,000 (actually \$9,144,920) or an average of over 30% on the paid-up capital. The following information is quoted without naming the companies:—

Paid-up Capital	Dividends.	Ratio.
\$ 600,000.....	\$ 570,000	95
1,228,200.....	1,105,380	90
1,959,435.....	1,240,975	63
1,250,000.....	562,500	45
660,000.....	275,000	41½
1,500,000.....	480,000	32
1,324,400.....	470,540	31¼
2,296,875.....	1,164,060	30
1,137,500.....	338,945	30

I know that this statement will be met at once by the remark, "Yes, but those are British companies, doing a world-wide business; they paid their dividends in spite of the United States and Canada out of the interest on funds accumulated in past years and more favorable periods, and their quotation can only be regarded as a weak effort to raise a point that positively has no bearing on the argument you are trying to make." Part of this I agree with, part I take issue with. I quote the facts as typifying the influence of commercialism on joint stock fire insurance companies, and if a dividend of 95%, however obtained, is justifiable on a business that merely acts as distributing agents for funds received from the many for the benefit of the few who suffer, it must show one of two things, either that the many have paid much too liberally to the distributors for services rendered and interest on capital, or that the interpretation of what is fair and just remuneration is the subject of considerable difference of opinion.

As I pondered these wonderful figures, however, it occurred to me that a little research might furnish some food for thought and reflection; accordingly I opened the volumes and found certain items that I imagine may interest you as they interested me.

In the first place I found that in some instances the paid-up capital of these companies was largely made up of bonuses from the accumulated profits. In one instance, with which I am particularly familiar, a sum of eight hundred thousand dollars was transferred from time to time to capital, and whilst this company is credited in the statement I have quoted from with paying a dividend of 8½% last year, it must be remembered that, on the original cash capital paid in, last year's dividend represents a distribution at the rate of 42½%, and so with others in lesser volume and amounts.

It is, therefore, quite safe to allege that the dividends paid last year by these 17 companies on the *actual cash capital paid in* by the shareholders is nearer 40% than 30%, and the application of the conclusion I have reached is made the more telling and conclusive.

For the past twenty years we have had repeated ever and anon the old story that joint stock fire insurance companies have been poor commercial investments, and while this is the case both in respect to our Canadian companies and also to some companies of British and United States origin, the reverse is clearly and easily proved as far as British companies now operating is concerned.

Of the 17 companies mentioned in the statement from which I am now quoting, I am only able to compare the actual results of eleven of them as between the years 1884 and 1904, and whilst a comparison of them all would have been perhaps fairer, I fail in the attempt because five were not then doing business in Canada and their records are not readily obtainable, and one had no capital with which the necessary comparison could be made. However, I believe the eleven whose record I have been able to trace would be found on full investigation representative of the whole 17, and the comparison may, therefore, be regarded as fairly reliable.

Comparisons of 11 British Offices, 1884 and 1904.

	1884.	1904.	Increase.
Capital paid up...	\$19,222,555	\$ 20,451,510	\$ 1,228,955
Dividends paid....	3,738,075	6,216,325	2,478,250
Ratio of dividend..	19½%	30%	10½%
Invested fire funds (including capital account).....	71,378,419	146,603,775	75,225,356

This is no fairy tale, nor fancied agglomeration of figures; they are startlingly true, and surely testify in language that cannot be misunderstood that, at least so far as eleven British offices are concerned, the commercial aspect of fire insurance has neither been lost sight of nor gone without a reward beyond the dreams of ambition and avarice.

In 1884 three United States companies were doing business in Canada, the capital employed was then, as in 1904, \$6,250,000. The dividends in 1884 I have not ascertained, but in 1904 they paid an average of 20% (actually \$1,279,325). Six other companies doing business in Canada in 1904 that were not represented here in 1884 also paid average dividends of 20%. The whole average is not equal to that paid by their British conferees, but it is tempting enough to almost make one forget the losses and disasters which are held up to us as making the business most precarious and alarming. That the three companies doing business here in 1884 also show an increase in their accumulated funds of \$21,605,890 is nothing, we shall be told, when consideration is given to the increased liabilities, but when we ascertain that, in addition to the large dividends these companies have paid, they have also by strict attention to business and rigid economy more than doubled their actual net surplus (actually, 1884, \$5,366,557; 1904, \$12,147,907; increase, \$6,781,350) after providing all necessary reserve to run off the risks in force on their books, I fear no commiseration need be offered for their sacrifices on behalf of the poor insured!

Has the effect of commercialism on the fire insurance business been for the benefit of the insured in any sense of the word? "He that runs may read," and surely there can be no uncertain conclusion drawn from the facts just submitted.

Lest, however, there should still linger in the minds of anyone any doubt on the subject, I would like, in closing this section of my paper to hurriedly present to you some further figures. I freely confess that I am drawing them from both the United States and Canada, in those spheres and conditions which most favorably affect the view I am trying to impress upon you; and I make no apology for doing so, because, while they are the most favorable, they are the most natural sources from which to draw.

In the republic to the south, the centre of mutual fire insurance is found in the States of Rhode Island and Massachusetts; in Canada it is in our own Province of Ontario. The figures I now give you are for the three years preceding the present one. They are taken from the official reports and are subject to verification.

COMPARISON OF RHODE ISLAND, MASSACHUSETTS & ONTARIO STOCK & MUTUAL COMPANIES, 1902-1904 (INCLUSIVE).

	Average No. of Companies.	Risks Written.	Premiums Collected Thereon.	Average Rate to Risks Written.	Losses Incurred.	Average of Losses Incurred to Risks Written.
RHODE ISLAND—						
Stock Companies...	103	422,671,433	3,937,119	0.93	2,079,812	0.49
Mutual Companies.	20	1,555,765,239	12,775,874	0.82	992,661	0.06½
MASSACHUSETTS—						
Stock Companies...	151	3,413,035,729	33,615,611	0.99	14,924,489	0.44
Mutual Companies.	45	983,100,324	10,006,639	1.02	2,265,065	0.23
ONTARIO—						
Purely Mutual Companies	72	159,438,526	985,597	0.62	702,749	0.44
Stock Companies...	..	Figures unobtainable.				
Cash Mutual Companies.....	12	17,396,293	1,035,543	0.60	Figures unobtainable.	

I cannot expect that you will readily absorb the full meaning of this last statement, but it will, I believe, well repay careful perusal.

In regard to the Ontario companies, we have little with which to make a comparison, but it is well known that the stock companies charge an average rate of 1.50% for three years on a precisely similar class of business to that transacted by the Ontario mutuals, whose average is 62 cents, and it is also well known that the average of losses incurred to risks written is not less than 1.10%, against an average of .44% of the mutuals.

Am I correct or not in asserting that commercialism in joint stock fire insurance companies has led to utter failure in its dealings with a very large section of the community?

I cannot possibly touch upon the development in recent years of the principle of individual underwriting. This branch of the subject offers material that would of itself occupy the half hour allotted to me to-night. All that I can say is that I believe this particular feature will yet achieve a position of great importance in the insurance world, and possibly out of it may come a large measure of relief from the ills to which mankind has fallen heir through that spirit of commercialism that I have tried to fairly represent to you.

"In perspective" I see past the winding pathway suggested in the early part of the paper, the mountain enveloped in cloud and mist. Its outline is indistinct; in parts it is altogether mysterious, yet these very characteristics make it conspicuous and commanding. It is the last feature upon which the eye dwells and the onlooker appears to tarry in the hope that the sun in his meridian will disperse the mists and clouds and reveal its full lines and proportions.

In its application to our subject it is that feature we have left to the last; the mountain is surely nothing else than a representation of the burdens of excessive rates from which all are suffering, and like he who gazes at the picture we see mystery and obscure forms and stand waiting for the mists and clouds to clear away.

Our insurance friends, one and all, tell us that the record for thirty-six years past shows that the companies have made no money, and as they are not philanthropists what alternative have they than to make the people pay? Their contention is that the Blue Books show:—

- (a) An average loss ratio during that period of. 69.61%
- (b) An expense ratio of say..... 30.00
- (c) A further sum to run off risks in force say of. 3.50

Total outgo. 102.11%

In other words that the business has just about met losses and expenses; it has not provided funds to run off existing risks (a feature that I at once admit must be reckoned with in considering results), and it certainly has not paid dividends on capital invested.

I am, however, obliged to dispute the correctness of this statement, for I find by the record that during the last 36 years the actual cost of doing the business has averaged 26.74%; in other words the record has been:—

- (a) Average loss ratio..... 69.61%
- (b) Expense ratio. 26.74
- (c) Necessary to run off risks..... 3.50

Total outgo. 99.85%

Therefore the companies have made 0.15% on over two hundred millions of dollars (actually \$201,575,618) taken as premiums during the 36 years, or \$312,362, truly a sum too insignificant to be worth considering.

Whilst I have been delving into the books to get the information I have just given you I have extended the scope of my enquiry, and one or two most interesting facts have presented themselves. I think they are sufficiently interesting to give to you.

Statement Showing Average Rate of Premiums, Losses and Expenses of Companies Reporting to the Dominion Government, Years 1869 to 1904, Inclusive.

YEARS.	Average Rate of Premium.	Average Ratio of Losses.	Average Rates of Expenses.		
			Total Expenses.	Paid for Com-missions.	Paid for Other Expenses.
1869 to 1878	1.02	86.10	22.75	16.20	6.55
1879 to 1888	1.15	63.00	25.16	16.55	8.61
1889 to 1898	1.33	64.60	28.96	18.38	10.58
1899 to 1904	1.41	71.80	30.08	19.12	10.96
36 years' average.	1.23	69.61	26.74	17.56	9.18

The figures of the past three years are doubly interesting.

1902	1.47	39.26	29.81	19.00	10.81
1903	1.50	51.57	30.17	19.80	10.37
1904	1.60	107.06	29.51	19.30	10.21

The figures 1869 to 1878 as to expenses are only estimates, as I have not had access to reports earlier than 1879, but I have taken the expense accounts of 1879 as being the average for the preceding ten years. In this I think I am favoring the insurance companies' position, as, judging from the geometric progression in each of the succeeding decades, it is reasonable to believe that in the first ten years the expense of conducting the business must have been less than the figures I have arbitrarily applied.

The following comments seem to me to be exceedingly pertinent:—

(1) During the thirty-six years, \$53,901,320 of the people's money was paid to agents and brokers by way of commission.

(2) That as the rates of premium went up, the ratio of commission increased, a condition of things which, from the standpoint of the insured is beyond excuse or justification.

(3) That a saving of even 5% on the commission paid to agents would have either saved to the insured, or preserved in the coffers of the companies a sum of over ten millions of dollars, a respectable profit on the turn-over.

(4) That with the commission on the ascending scale there is certainly no incentive to agents and brokers to seek to reduce rates or to make it a pre-eminent part of their business, as it should be, to put forth every effort to reduce the fire waste of the country.

(5) Conflagrations occur and pass into history; after these events the public are called upon to make good the amounts paid in consequence thereof, but on no single occasion have the companies evidenced the slightest desire to alleviate the burden or rise to the possibilities of the occasion by curtailing an expenditure well within their power to regulate.

To these I must add a conclusion I have reached, not arising particularly from the statement, but gleaned from my experience. It is that the high rate of commission paid has led to hundreds, if not thousands of men, exploiting this profitable field for their own advantage, men who have no training, experience or special fitness for the work, who nevertheless stand on a par in respect to remuneration with those who have demonstrated their right to the term "expert." Further, I believe it would have been for the good of the men engaged in the business, for the men who pay the piper, and for the insurance companies, if some paternal legislation could have been passed limiting the commission generally to a figure not exceeding 10%; what this would have meant to you, and the people who insure, is a simple calculation.

And may I make this suggestion, that the records of the business, even so far as the loss ratio is concerned, might have assumed a different aspect if the spirit of emulation after large figures, and of commercialism after large profits, had not led to an aggregation of liability altogether out of proportion to the revenue or the resources of the companies.

In 1870, when the combined population of the States of Rhode Island and Massachusetts was less than one-half the present population of Ontario, when the people of the entire State of Rhode Island were in number less than there are in this city to-day, 47 mutual fire insurance companies embraced in the records I have given you during the course of the evening were engaged in solving many of the problems that now confront us; how well they laid the foundations and have builded thereon I have shown you. With risks certainly superior to what existed in these States at that time; with people of equally good moral and financial standing, with reform in insurance practices demanded from one end of the country to the other, with stringent laws prohibiting insurance in any but licensed companies, with precept, example and record pointing us the open door, we are practically content with growling at the powers that be, yet meekly, shall I say irretrievably submitting to their ipse dixit. Let us get back to first principles which the onslaught of commercialism has utterly failed to overthrow or impair, let us adopt the motto of democracy "insurance by the people, for the people," and let us beware lest in chasing the shadow we lose the substance.

FACTS FROM THE INDUSTRIAL CENSUS.

The third volume of the census of 1901, which has only recently made its appearance, relates exclusively to manufactures. In summarizing the returns, the Commissioner reports that the census has been taken for 14,650 establishments, representing 264 classes of industries. The value of total capital employed is \$446,916,487, consisting of \$209,378,638 in lands, buildings, machinery and motive power, tools and implements, and \$237,537,849 in working capital. The number of persons employed on salaries is 30,691 with salaries of \$23,676,146, and the number on wages 313,344 with wages of \$89,573,204, making the number of employees of all classes 344,035 and the cost of salaries and wages \$113,249,350.

The miscellaneous expenses of all factories and shops comprise \$1,511,608 for rent of works, \$541,480 for rent of power and heat, \$6,529,697 for fuel and light, \$1,385,119 for municipal taxes, \$363,753 for provincial taxes, \$12,557,427 for rent of offices, interest, insurance, internal revenue tax, etc., and \$1,799,753 for contract work, being a total of \$24,688,837. The cost of materials used is \$266,527,858, being \$149,508,062 for crude and \$117,019,796 for partly manufactured materials. Summed up under principal heads of expenditure, the outlay of manufacturing establishments in the census year is found to be:—

For salaries and wages.....	\$113,249,350
For materials, raw and partly manufactured.	266,527,858

For miscellaneous expenses..... 24,688,837
making a total of \$404,466,045. The value of total products is \$481,053,375, being for goods manufactured in establishments \$469,258,351, and for custom work and repairing \$11,795,024.

In 1881 the number of establishments of all kinds was 49,722 and the value of products \$309,731,867; in 1891 the number was 75,964 and the value \$469,847,886; in 1901 the number of establishments employing five hands and over was 14,650, and the value of their products \$481,053,375.

For 1901, with 30 per cent. of the number of works reported for 1881, the employees were more by 89,100, and with 19 per cent. of the number of works for 1891 the employees were less by 25,560; but the wages of employees in 1901 were \$53,820,348 more than in 1881, and \$12,834,000 more than in 1891.

The averages show, as was certain to be the case, large increases in the number of employees and in wages per establishment in 1901 over 1881 and 1891; and they also show, what was not so certain to follow, a large increase in the wages per employee. From 1881 to 1891 the increase was \$38.58, and from 1891 to 1901 it was \$57.47, while the ratios of men, women and children to total employees was practically unchanged during the period, except that in the case of children the ratio of number employed fell in the last decade by 50 per cent.

CHEMICAL INSPECTION AND ITS VALUE TO INDUSTRY.

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IN defining this specialized branch of technology, it might be said that chemical inspection consists in the subjecting of any materials, the value of which for economic purposes may vary with their chemical condition, to such an examination, either chemical, physico-chemical or micro-chemical, as will determine the suitability of such materials for industrial use.

The chemical inspector is thus differentiated from the analytical chemist, inasmuch as he does not

necessarily follow certain well-defined methods of analysis, but he must make a discriminating analytical examination, using any method which leads to results, and he must interpret these results entirely in accordance with the purpose for which the material under examination is required.

It follows that the chemical inspector must be much more closely in touch with the trade than the analyst, for he must choose, discard and recommend according to the manufacturer's needs.

The position of this profession is an important one in those countries where science and industry are now found working hand in hand in the production of progress and profits. In the United States, and especially in Germany, the expert inspection of materials has become a fixed custom, and they find it is one that pays. The manufacturer who ignores inspection while others are using it, is contentedly and unwittingly working up the materials that the others do not want, is getting poorer value for his money, is making an inferior article, and is receiving a poorer price. The results from ignoring the laws of progress are not only individual, but national, for in a country where little or no inspection exists, standards of quality cannot be maintained, and the national trade mark, "Made in ———," becomes a by-word and a jest rather than a synonym of honest value.

When a man enters the market with goods which are subject to inspection, he must safeguard himself by carefully inspecting the materials which he puts into those goods. In order to make this inspection effective he must establish standards of quality suitable for the purpose required, and have these standards definitely fixed by specification. If only such materials are purchased as are found to conform to these standards, a large constant loss due to the accidental production of inferior goods will be eliminated. Many a costly experiment may be prevented by carefully investigating a material before using it. In fact, it is possible for the manufacturer who makes a technical examination of his material, to know more about its properties and value than his competitor will find out in a year of mill experience.

Concrete Illustrations.

Let us now consider in some detail the application of inspection to those materials of trade whose qualities are largely influenced by their chemical relationship.

The first to suggest themselves are the heavy chemicals, such as the acids, and the alkalis and their salts. The relative value of these of course depends upon their strength and purity. In the case of bleaching powder, which we use in such large quantities, each imported consignment is generally accompanied by a certificate from an independent inspector who has tested the shipment and reports a certain strength. This is certainly all the English manufacturer can do, but what about the heat and moisture of a

summer's voyage, the rough handling and exposure on the docks, and the results of their influences? Some salts, such as sulphate of alumina, carry large quantities of water, although they are apparently dry, and it is impossible to ascertain their relative strength and value without a careful analysis.

Next to the heavy chemicals come the pigments and fillers which are used so largely in the paint and textile trades. Their value depends largely upon their strength and purity of color, fineness, covering power, etc., and these properties can only be determined by a careful chemical, physical and microscopic examination. China clays, which are the commonest fillers in use, afford an excellent illustration. To the casual observer they all look very much the same, and as a consequence we find that a certain stated price might stand for a dozen different grades, just because the customer is unable to discriminate.

In close association with these materials are the varnishes, vegetable oils and paints, the chemical nature of which is what makes or mars their usefulness.

Lubrication.

A by no means unimportant branch of chemical technology is what might be referred to as the science of lubrication. This is a difficult subject on which to generalize on account of its complexity and many changing conditions. Broadly speaking it may be said that a knowledge of the chemical and physical properties of fats and oils is a valuable guide in the selection of the materials suitable for various purposes. The chemical results are not an infallible guide, however, for in lubrication the actual results are the only ultimate proof. Nevertheless a technical investigation is like the path out of the woods to a lost man, for it points him to the selection of what he wants with the minimum of trial and error. No man can make a practical trial of every article offered for sale, and he should have some means of detecting and discarding the inferior values that are offered him every day. What the manufacturer should realize is that experiments cost money, and that the longer he guesses at the materials which he is using, the more his experience with them will cost him.

There is a part of the lubricating question which is apparently beyond the reach of oil-testing appliances; it includes the numberless so-called greases which we find upon the market to-day. These are not natural greases, the same as tallow or lard, but are mixtures of oils and soaps, the presence of the latter giving the oil a more or less solidified appearance. The value of the greases is a variable factor, because the lubrication they produce depends entirely upon the lubricative value of the oils and fats from which they are made, and, unfortunately for the consumer, their price is not always a criterion of value.

Color Tests.

Another important branch of chemical industry, the results of which are visible to all, is the art of manufacturing and utilizing dyeing and coloring materials of all kinds. Now, inasmuch as the artificial color industry owes its existence to scientific methods, it is natural to suppose that the purchase of dyeing materials would be entrusted to some one whose technical knowledge would enable him to form a correct estimate of their properties. This is not always the case, however, and we frequently find consumers who are unaware of the competitive values of such materials. Even when the producer's knowledge of coloring is limited to a formula, this presupposes a definite standard of strength and quality, and when the standard is not maintained, the formula is worthless.

In testing the value of these colors there are two main points to be considered; one is the strength of the color, and the other

is the shade it produces. The strength of the color is ascertained by dyeing a known weight of the materials on which it is to be used with a known weight of color. The tone and shade of the color is generally judged by the eye of the operator, and although a practised eye can become very accurate, yet we cannot get away from the personal equation.

There is a machine, however, for color-testing, which was patented in England by a brewer. It is called the "Tintometer," and was first used for comparing and standardizing the colors of beer. With this apparatus the color and brilliancy of any object can be measured and recorded so that they can be exactly matched at any future time. It is now used in many industries, and often the color test has replaced chemical analysis, being much quicker and equally certain. For instance, it is used in the standardizing of fats and petroleum, in the valuation of flour, in estimating the quality of malt, and in the standardizing and blending of printing inks, pigments and paint bases, etc. The analyst uses this apparatus in water analysis and in the estimation of carbon in steel. By means of it the silk, wool and cotton dyer can standardize his goods, test the stability of the shades, and measure the color left in the bath. It is also used to good advantage in the manufacture and inspection of colored papers.

All these instances merely indicate the benefit that industries may derive from technical inspection with the use of one piece of apparatus. There is hardly a branch of trade which does not receive an impetus from scientific treatment, and our knowledge concerning the properties and usefulness of materials is certainly increased when we become familiar with their chemical, physical and microscopic nature.

The Operation of Steam Plants.

It is sometimes said that this information is interesting, but not practical. We will grant that it is an interesting thing to know how much carbon, hydrogen and oxygen there is in a coal, but it is also an exceedingly practical thing to know how much coke, gas and ash it contains, and the total amount of heat it is capable of producing. The man who ignores such data as being merely interesting facts probably derives his knowledge from inspiration. In case a boiler is steaming badly, don't always blame the coal. Perhaps from lack of draught and other conditions the boiler has indigestion, and is busy generating coal gas for aerial distribution. The analysis of the products of combustion will show fairly well what is taking place, and will enable the engineer to locate the source of loss. In fact, by a simple analysis of the chimney gases and determination of their temperature, a very good idea of the efficiency of the plant can be obtained previous to making the engineering test. Prof. Gill cites an instance where he increased the efficiency from 58 to 70 per cent. on the results of gas analysis alone. In many manufactories and metallurgical works the analysis of gases from various operations serves to control these operations and to indicate the progress of the processes.

There is one other factor in the cost of steam production which has now become generally recognized, and that is the advantage to be derived from the use of soft water. When a soft water cannot be obtained it will often pay to soften it artificially, but this will depend upon the nature of the water, the type of boiler, its pressure, circulation, etc. However, in any case the cost of the water will be small compared to the cost of converting it into steam. It is well within the average to say that in using a water of 20° hardness, the decrease in efficiency due to scale formation, more frequent blowing-off and increased repairs will be about 20 per cent. This will show how vitally important the subject is to the steam consumer, and how essential it is for him to select a suitable water for his use. This fact is of special importance in the location of pumping stations for railroads. Even when an unfortunate selection of this kind is made, money would often be saved by abandoning the location.

Micro-Chemical Analysis.

One of the most important methods of inspection, one which has only recently come into vogue, yet before which a large

sphere of usefulness has opened up, is that of micro-chemical analysis.

By its use we are enabled to detect the presence of starch, dextrine or salt in coloring matters, tar, moisture or fat in mineral oil, the common adulterations of pigments and the kind of fibres used in textile trades.

With the microscope one can identify the fibrous materials from which a paper is made and the approximate proportion of the same. The consumer will often say that this is of no interest to him, for as long as the paper looks right and serves the purpose he is satisfied. This means that if he buys a linen paper he does not care whether it is made of cotton or wood fibre, and the latter is what he often gets. Now the relationship and structure of the fibres, the chemical processes through which they have passed, and the chemical residues they contain, serve to control or influence the quality of the finished product. Therefore, where this commodity is subjected to neither specification nor inspection it is not surprising that no real standards exist, and that goods are often not what they seem.

Another application of microscopy is found in the study of the micro-structure of metals, especially that of iron and steel. This science, called metallography, enables the investigator to determine to a great extent the character of these materials. It deals with the close relationships which have been shown to exist between the structure and the treatment to which the metals are subjected in the process of manufacture, and also between the structure and physical properties of the metals. Different treatments, thermal and mechanical, impart different properties to a metal, whose composition remains unchanged, because such treatment modifies its structure. Therefore, the physical properties of metals are a function of their chemical composition and of their structure, the latter being equally as important as the former. In fact, both the structure and composition of the metal must be faultless in order to obtain the highest degree of efficiency for each set of requirements.

Generally speaking, it may be said that the ultimate aims of metallography and metallurgical chemistry are: First, to acquaint the consumer with the structure and composition which he should demand in a metal that must meet a certain specific requirement; and, secondly, to aid the manufacturer in the production of same. The industrial importance of this science and its application both in production and inspection are being rapidly recognized.

This sketch would be incomplete without some reference to the chemical nature of Portland cement, the growing consumption of which is only rivalled by its many useful applications. The engineering specifications for this article have undergone many alterations and modifications during recent years, and it is doubtful if a completely satisfactory specification which will remain as a standard has yet been offered. However, the importance of certain well-defined chemical relationships, and the narrow limits within which variations may be allowed, are fully recognized. In regard to what these are the reader is referred to the latest Government specification on this material. In fact, cements may now be rejected solely on the grounds of faulty composition.

There are many other materials, such as glass, pottery, enamels, leather, glue, size, sugar, starch and gums, a knowledge of whose chemical properties is essential for industrial purposes, but it would take too long to discuss them, even as incompletely as the previous materials have been discussed. Moreover, enough has already been said to illustrate the wide scope of this subject of chemical inspection and its important bearing on industrial development. The danger to Canadian manufacturing industries lies in competition that is national rather than individual. Their foreign competitors have increased production and reduced cost by the expenditure of time and money in getting to the bottom of things. It is important that the manufacturers of this country should realize this fact, for by the adoption of similar methods of production they would take a great step forward in solving the problem of foreign competition.

CANADA'S TRADE WITH AUSTRALIA.

ITS POSSIBILITIES AND HOW TO INCREASE IT, BY ONE WHO HAS STUDIED IT.

If the business men of Canada are not thoroughly aroused to the possibilities and importance of the Australian market, it is not because Mr. J. S. Larke has failed to do his duty in impressing this subject upon their attention.

Mr. Larke has spent several years in Australia as Commercial Agent for the Canadian Government, with headquarters at Sydney. His work has brought him into close touch with mercantile men from all sections of that country. He is, therefore, a man of wide experience with the subject whereof he speaks. Naturally gifted with keen powers of observation, and possessed of shrewd business judgment, his remarks upon the trade situation there are particularly valuable.

Some weeks ago Mr. Larke returned to Canada, ostensibly on a visit to his friends and relatives. His friends have found that they must content themselves with the pleasure of his society on Sundays: the other six days of the week he has been busy preaching the gospel of Australian trade, and has had no time for social amenities. "Business before pleasure," is Mr. Larke's motto, and with him business means the strengthening of the commercial tie between Canada and Australia.

In an interview recently accorded *INDUSTRIAL CANADA*, Mr. Larke quoted numerous statistics illustrating the growth of our export trade in Australia. In this connection it should be explained that it is a very difficult matter to procure figures representing the exact amount of that trade; the returns from Australia are woefully inaccurate, while Canadian statistics must of necessity also be somewhat inaccurate, owing to the fact that considerable quantities of Canadian goods are bought by New York middlemen and sent to Australia as from the United States. Generally speaking, however, it may be stated that from a modest beginning of \$100,000 in 1874, our exports to Australia have grown to something over \$3,000,000 a year at the present time, an amount which there is every reason to believe could be largely increased owing to the marked satisfaction with which Canadian manufactured goods are received in that country.

Difficulties in the Way.

But it must not be supposed that this trade will grow simply by Canadians sitting down and waiting for it. Before much progress can be made there are serious difficulties to be overcome, the solution of which call for careful study, determined effort, and no little sacrifice of both time and money.

One of the first of these is the apparent inability of the Canadian exporter to fill orders promptly. Owing to the steady increase in the home demand, it frequently happens that when

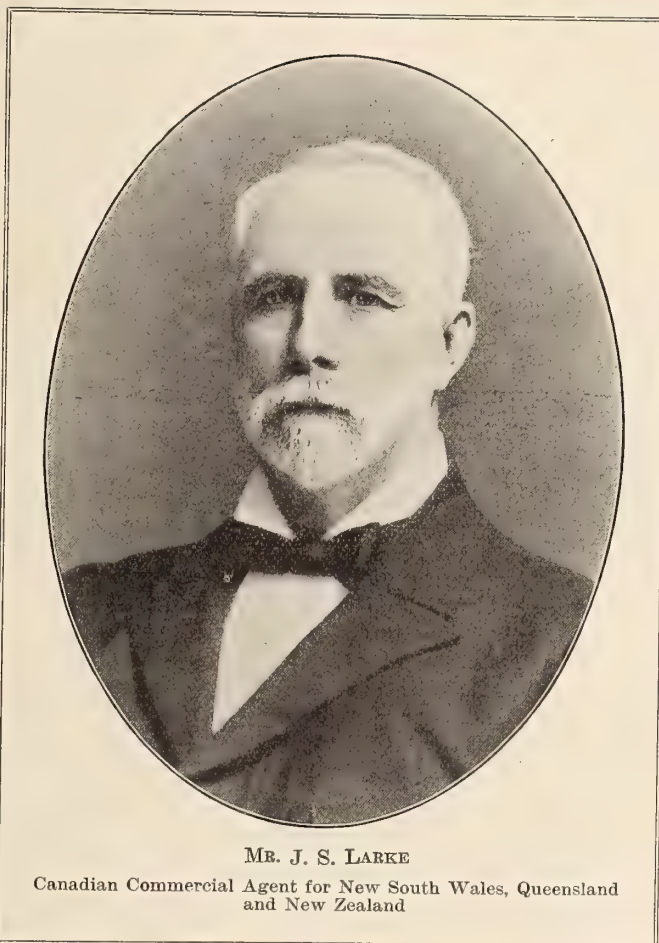
orders are received from Australia the full capacity of Canadian mills is taken up with filling domestic orders. The shipment to Australia is consequently deferred, and when finally the goods do reach their destination the time is past when such supplies were necessary. This is especially so in the case of news paper. A printer must necessarily have his stock in time to get out his regular editions; if it does not arrive, and his supply runs short, he is compelled to buy from the jobber who is on the spot. Knowing from past experience that Canadians are frequently unable to deliver goods when ordered, he prefers to deal elsewhere, and the United States or some other country gets the business.

Another difficulty the manufacturer in Eastern Canada has to contend with is the question of freights. The long rail haul to

Vancouver increases freight rates to such an extent as to make shipment by that route almost prohibitive. The only other route at present is via New York, which is also unsatisfactory in that it is an expensive port for Canadians, and one where their goods are more than likely to be delayed. Even the largest and most trustworthy of the New York houses cannot be depended upon for great promptness in the shipment of Canadian goods, for the reason that they have many clients among the larger manufacturing concerns in the United States whose business is of more importance to them than the business they get from Canada. Naturally they attend to such business first, and as often as not the poor Canadian is compelled to wait.

The third difficulty has to do with the New York middleman and the common practice whereby Canadian manufacturers defeat in a large measure the success of their business in Australia. Let us suppose one of our manufacturers sends a traveller to Australia at heavy expense to popularize a certain line of goods and to sell them at a certain price. He meets with some

success. Immediately word is sent off to the New York middleman by his selling agent in Australia that these Canadian goods are being placed upon the market and are giving satisfaction. By return mail the agent will receive instructions to interview the buyers of the Canadian goods, and ask them to entrust him with securing the same article at a lower price. He will represent that his New York people can supply the goods much cheaper than the traveller is selling them. Naturally they will withhold further orders from the Canadian traveller until such time as the agent has had an opportunity to make good his promise. In the meantime the New York middleman will come to the Canadian manufacturer, and, without mentioning any particular market will secure his lowest cash quotations on large orders. It frequently happens that the price thus quoted is considerably lower than the



MR. J. S. LARKE

Canadian Commercial Agent for New South Wales, Queensland and New Zealand

price quoted by the traveller in Australia; if so, a sale is at once effected, the goods are sent forward to Australia, and in a short time the customer has been supplied at a lower cost than that which he paid the Canadian traveller. The next time the latter puts in an appearance he is accused of having attempted to work a hold-up.

The Canadian manufacturer should invariably stick to his price in these matters, because, as has been pointed out, it often occurs that the goods which are ordered in New York are to be sold to the very customers whom he has been spending money to secure through the agency of his travelling representative.

Direct Steamship Service from Eastern Canadian Ports.

The first requisite to enable Canada to extend her trade with Australia is a direct line of steamers from Montreal or the ports of the Maritime Provinces. After years of uphill work, and in spite of many adverse circumstances with which they have had to contend, Canadian manufacturers have now reached a point where in some few lines they can profitably engage in an export business. If they are going to do so with success they must be placed upon the same footing as their competitors in other manufacturing countries. In other words, they must have steamship lines of their own.

In discussing the establishment of a line to Australia, the first question that suggests itself is, will it pay? Mr. Larke says yes, most emphatically yes. For some time he has warmly advocated the extension of the South African line to Australia. The South African line has not, up to the present, proved much of a money-maker, on account of the fact that there is very little offering in the way of return cargoes. By extending the run to Australia the return cargoes would be assured.

Of Canada's ability to supply the outbound cargoes, Mr. Larke has not the least doubt. There are certain articles which can be produced more cheaply in Canada than in the United States, and of which Australia requires large quantities. Among these are paper, timber and plaster of paris. Already our eastern provinces are sending a considerable amount of spruce timber to Melbourne. As yet the demand for this article is not very great, but it is steadily increasing, and later on there should be a good market for it in Sidney as well as in Melbourne. Ordinarily lumber is shipped in schooner loads in sailing vessels, but in the case of short cargoes it would be very useful in filling up. The demand for plaster of paris is quite large. There are about 4,000 tons a year imported from the United States, all of which probably comes originally from Canada. Paper, of course, is something for which there is a steady demand. Australia's yearly consumption of uncoated printing paper is about 25,000 tons, representing a value of \$2,500,000, and there is no reason why Canada should not secure a very large proportion of this trade. Other lines in which successful businesses have been built up are agricultural implements, bicycles, carriages, office furniture, plumbing supplies and heating appliances.

The second question which suggests itself in connection with a direct steamship service is, would it require to be subsidized, and, if so, could Australia be counted upon to help with the subsidy? To both of these questions Mr. Larke's answer would be no. There are already four different lines running between New York and Australia, none of which receives any subsidy. They find the business profitable enough without, and there is no reason why a Canadian line operating a monthly service should not find it equally so. The Australian Government has steadily refused to subsidize any of the lines plying between her ports and other countries, and would in all probability adopt the same course with regard to a line such as is here proposed, though the New Zealand Government might be induced to assist in its establishment as they appear to be very anxious to secure direct connection with the East Coast of Canada.

From the shipper's point of view the advantages of such a line need no pointing out. From almost any point in Eastern Canada goods could be assembled, say in Montreal, as cheaply as they could in New York; railway men say it could be done more

cheaply. Ships can be loaded more cheaply in Montreal than in New York, and annoying delays like those already mentioned would be avoided. The voyage, of course, from Montreal would be somewhat longer than from New York, but this would count for very little, as a few days more or less at sea is a comparatively small item once the goods are embarked.

The importing merchant in Australia would welcome such a line, for he does not care to have his goods sent through a New York middleman. Past experience has shown him that when the pioneering work has been done and the agency found to be a good one, the New York middleman invariably endeavors to get the agency for himself and to sell through his own representatives in Australia. Moreover, the middleman finds it to his advantage to make known the amount of trade of this kind that is being done, whereas it is to the advantage of the importer that such matters be kept quiet.

Canadian Exporting Companies.

Not only is a direct steamship service necessary, but what is quite as necessary is a proper means of conducting the business in a practical way. First and foremost of these requirements would be a strong exporting company which should have a capital of half a million dollars. This company would not only pioneer markets for new lines of Canadian goods in Australia, but in other countries as well. Companies of this kind have already been organized in Canada and have done good work, but Mr. Larke thinks their scope of operation should be enlarged. They should go direct to the Canadian makers, and, when circumstances permitted it, buy goods outright. They should have their own representatives in all of the different fields, and these representatives should be men of first-class ability. They should be paid upon a salary basis in order that there might be no inclination on their part to push the sale of any lines of goods which were more lucrative to them in the way of commission. They would thus be strictly impartial and all goods entrusted to them would receive equal consideration. Such companies should be a great deal more than mere commission and shipping agencies; they should have offices in Sidney, Melbourne, New Zealand and South Africa.

General Observations.

Mr. Larke states he has frequently found that commercial travellers visiting Australia are inclined to give very erroneous reports of trade possibilities. These errors tend as often to be pessimistic as to be over-sanguine. No traveller can in a few months grasp the true commercial condition of a country, and should not be willing to form opinions and give advice. It takes years to get the true understanding of things, and this is one reason why in place of depending upon the superficial representations of travelling men, Canadian manufacturers should avail themselves more of the advantages of the Department of Trade and Commerce. The representatives of the Department are willing and anxious to give all the information which it is possible for them to obtain, and to do everything they can to advance trade along substantial lines, and they necessarily have the advantage of long and constant experience, with a view from behind the scenes.

Another thing he cannot too strongly urge upon Canadian manufacturers, and that is that they should invariably be *exact* in filling orders as well as *prompt*. Australia being so far from here leaves no margin for changes or rectifications. This should be considered in shipping. Exact and definite orders should be required as to the manner of shipping and the class of goods wanted, and then these orders should be filled to the letter and invariably shipped as promised.

"There is every indication," continued Mr. Larke, "that a strong and increasing trade between Canada and Australia can be built up, and as far as I can see there is nothing in the future that should tend to lessen this trade. Australia's progress as a manufacturing country is along different lines from ours, and unless Canada is alive to her opportunities and secures a share of the trade that is open to her at the present time, others will get the market and her opportunities will be gone."

The Mixed Carload Principle in Theory and Practice.

The objections of the Canadian Manufacturers' Association to the present regulations of Canadian railways respecting the application of carload rates to shipments of mixed carloads were recently heard by the Board of Railway Commissioners.

The former freight classification, No. 11, permitted the shipment of mixed carloads at carload rates. If articles of more than one class were included in the shipment, the carload rate for the article in the highest class was applied on the whole carload. In Classification No. 12, the railways have arranged various commodities under groups, or headings, such as agricultural implements, groceries, hardware, machinery, stoves, woodenware, etc., and require that a mixed carload, to obtain the benefit of a carload rate, shall be made up only of articles included in such distinctive groups. Complaint is made that the restrictions with which the railways have surrounded the application of carload rates to mixed cars discriminate against localities, commodities and shippers, and subject the latter to undue prejudice because mixed carload rates are authorized in favor of certain other shippers with whom they are in direct competition in the markets. It is also complained that the action of the railways has the effect of unduly restricting free competition in trade. In order to clearly understand the matter, it is necessary to consider the reasons for granting a lower basis of rates on carload than on less-than-carload shipments; what constitutes a carload; and the difference between so-called "straight" and "mixed" carloads.

Reason for Carload Rates.

The application of lower rates to carloads than to less-than-carloads has been held to be justified upon the difference in cost of service, in risk of carriage, in length of time cars are in use, and because the loading and unloading of carloads is frequently done by shippers and consignees. In proceedings before the Interstate Commerce Commission of the United States this question has been gone into very thoroughly. In *Thurber v. N. Y. C. & H. R. R.*, 2 I.C.C., p. 748, will be found the testimony of railway representatives to show the great difference in cost of transportation and in economy of equipment, together with the results of actual tests extending over months on six trunk lines. In the case of the *Business Men's League v. A., T. & S. F.*, 9 I.C.C., p. 318, the question is again gone into, and from the testimony of railway experts in that case, the Commission found the average cost of handling less-than-carloads to be 50% greater than carloads. So that a lower rate for carloads has been held to be justified on these grounds.

It may be noted here that in making special commodity rates upon carloads and less-than-carloads the Canadian railways frequently make a difference of 50% over carloads for less-than-carload shipments. A reference to the table of mileage rates approved by the Board of Railway Commissioners as maxima for use on Canadian railways will show that the difference between third and fifth class rates is 50%, and the Canadian classification, as a general rule, gives fifth class rating in carloads for articles which take third class in less-than-carloads. The relation between second and fourth class rates is about the same.

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Figures indicating the growth of carload ratings in Canada are not available, but that the railways here encourage the carload movement is evidenced by the fact that within recent years they have cancelled nearly all commodity rates on less-than-carload lots and have retained as far as possible only carload commodity rates in effect. This action tends to promote the assembling and consolidating of shipments into carload quantities. It would seem, therefore, that carload transportation is more economical and is preferred by railway companies.

What Constitutes a Carload.

Carload shipments are really an assembling together of less-than-carload quantities by a shipper until the aggregate makes the required carload weight. (There are some exceptions, such as coal and lumber.) Take, for instance, a carload of live stock. The stock drover goes through the country purchasing small lots of cattle from various farmers. These are assembled in the railway yard and shipped to market as a carload. At the market the load may be sold in broken lots to butchers and exporters. Or, a carload of produce is collected by a shipper at a country point and shipped to a wholesaler at some centre. The wholesaler divides the shipment into lots to suit his various customers, and, in many cases, makes delivery to the different customers direct from the car. The same applies to shipments of manufactured articles. The furniture factory receives cars for various lots of the same or different kinds of furniture; these are assembled together and shipped as one carload to the agent or distributor at the point of destination, and by him distributed to the various dealers or purchasers for whom the orders are made up. Agricultural implements, the product of one or more factories, are assembled in carloads and shipped to a given point, there to be immediately distributed to the various agents or consignees for whom they are ordered.

This point is clearly brought out in the case of the *Buckeye Buggy Co. v. C., C. & St. L. Ry.*, 9 I.C.C., p. 620, which dealt with the rights of carriers to refuse carload rates upon combined lots of carriages of different kinds from eight to ten concerns when aggregated into carloads. The Commission there said the broad question had reference to the right of a carrier in according a carload rate to look beyond the transportation itself to the ownership of the goods transported. It was held that before allowing a carload rate to a carload shipment the carrier is entitled to require that the goods shipped shall be loaded at one time and place, that a signed bill of lading shall be issued, and that the shipment shall be from one consignor to one consignee; but that when the goods are so loaded and by the terms of sale become the property of consignee upon delivery to the carrier, the carrier has no right to enquire whether the consignee obtained his title from one or several owners. In this case the Commission also said:—"It must be noted, however, that if the privilege of combination is denied, the inevitable tendency is to drive the small manufacturer out of existence altogether, and centre the business in establishments which can produce all varieties and kinds; so that the purchasers can buy an entire carload at a single factory."

Mixed Carload Restrictions.

What difference can there be in the circumstances surrounding the transportation of a mixed carload as against a combined or

price quoted by the traveller in Australia; if so, a sale is at once effected, the goods are sent forward to Australia, and in a short time the customer has been supplied at a lower cost than that which he paid the Canadian traveller. The next time the latter puts in an appearance he is accused of having attempted to work a hold-up.

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Figures indicating the growth of carload ratings in Canada are not available, but that the railways here encourage the carload movement is evidenced by the fact that within recent years they have cancelled nearly all commodity rates on less-than-carload lots and have retained as far as possible only carload commodity rates in effect. This action tends to promote the assembling and consolidating of shipments into carload quantities. It would seem, therefore, that carload transportation is more economical and is preferred by railway companies.

What Constitutes a Carload.

Carload shipments are really an assembling together of less-than-carload quantities by a shipper until the aggregate makes the required carload weight. (There are some exceptions, such as coal and lumber.) Take, for instance, a carload of live stock. The stock drover goes through the country purchasing small lots of cattle from various farmers. These are assembled in the railway yard and shipped to market as a carload. At the market the load may be sold in broken lots to butchers and exporters. Or, a carload of produce is collected by a shipper at a country point and shipped to a wholesaler at some centre. The wholesaler divides the shipment into lots to suit his various customers, and, in many cases, makes delivery to the different customers direct from the car. The same applies to shipments of manufactured articles. The furniture factory receives cars for various lots of the same or different kinds of furniture; these are assembled together and shipped as one carload to the agent or distributor at the point of destination, and by him distributed to the various dealers or purchasers for whom the orders are made up. Agricultural implements, the product of one or more factories, are assembled in carloads and shipped to a given point, there to be immediately distributed to the various agents or consignees for whom they are ordered.

This point is clearly brought out in the case of the *Buckeye Buggy Co. v. C., C. & St. L. Ry.*, 9 I.C.C., p. 620, which dealt with the rights of carriers to refuse carload rates upon combined lots of carriages of different kinds from eight to ten concerns when aggregated into carloads. The Commission there said the broad question had reference to the right of a carrier in according a carload rate to look beyond the transportation itself to the ownership of the goods transported. It was held that before allowing a carload rate to a carload shipment the carrier is entitled to require that the goods shipped shall be loaded at one time and place, that a signed bill of lading shall be issued, and that the shipment shall be from one consignor to one consignee; but that when the goods are so loaded and by the terms of sale become the property of consignee upon delivery to the carrier, the carrier has no right to enquire whether the consignee obtained his title from one or several owners. In this case the Commission also said:—"It must be noted, however, that if the privilege of combination is denied, the inevitable tendency is to drive the small manufacturer out of existence altogether, and centre the business in establishments which can produce all varieties and kinds; so that the purchasers can buy an entire carload at a single factory."

Mixed Carload Restrictions.

What difference can there be in the circumstances surrounding the transportation of a mixed carload as against a combined or

straight carload, to warrant railways in discriminating between them as they do in the classification? In the rule, of which complaint has been made, are they not attempting an undue restriction upon trade? In the Thurber case the Commission says:—"Rates should be adjusted to correspond within reasonable limits to the existing business of the country in which the public generally is interested. It is not the province of carriers to regulate business or to build up or destroy markets, but it is their duty to serve business interests equitably and impartially. The evidence shows that the public is far more largely interested in miscellaneous shipments than in solid carload shipments of one kind of traffic. While this condition exists, the carriers have a duty to perform, to make their service equitable and as reasonable as just compensation for their work will permit. All rates must be reasonable and just. Differences ranging from 40% to upwards of 100% upon the same goods to the same destination in substantially like quantities, as well as in less, in the same kind of cars, and perhaps hauled in the same train, are manifestly neither reasonable nor just, and work undue prejudice and disadvantage to shippers and consignees of miscellaneous freight, both in full carloads and in smaller quantities. The circumstance of many consignors to many consignees of a full carload to the same destination is too unimportant in the item of cost of handling to admit of difference in the rate." The Commission, therefore, has laid down the principle that mixed car lots from various factories must be given carload rates when forwarded from one shipper to one consignee.

English Practice.

In England practically this same question has arisen, and it has been decided under the equality clauses of the R. C. C. Act, 1845, that a carrier cannot impose a higher rate even when the property is in combined lots and tendered for shipment by an intercepting or forwarding agent than when offered for shipment by the owner. In the case of the *Great Western Ry. v. Sutton*, L.R. 4 H.L. 260, these words occur:—"To say that the plaintiff is what has been called an intercepting carrier and the other persons using the railway are wholesale dealers; therefore, the goods are not conveyed along the railway 'under the like circumstances' is an application of the words which I am unable to comprehend." Since that time the practice of shipping combined lots by forwarding agents has been general. As a matter of fact, it is the practice to-day, in connection with traffic forwarded from England to Canada and the United States, to handle the same through forwarding agents who consolidate from various shippers and obtain favorable rates from the carriers, having regard to the aggregate quantity consolidated. The Canadian and United States railways both seek after this business and quote most favorable rates upon it, into far interior stations.

What We Ask.

But the application of the Canadian Manufacturers' Association does not go to such length. The principle we advocate in connection with mixed carloads was embodied in the last issue of the classification approved by the Governor-in-Council, which permitted the shipment of articles having carload rates in mixed carloads on the basis of the rate for the article in the highest class included in the car, when forwarded by one shipper to one consignee. In the classification at present in use, this arrangement is restricted to the territory east of Port Arthur. From the east to points west of Port Arthur and between points within the territory west of Port Arthur, the shipment of mixed carloads is restricted by the railways to such articles as they include in the classification under one distinctive heading.

Mixed Carload Principle Recognized.

The railways have recognized this principle by providing mixed carload rates for various articles under the distinctive headings in the classification. In doing so, however, they have drawn an arbitrary line restricting the mixed carloads to what are claimed by them to be articles in one line of trade. It has been stated by railway representatives that mixed carload rates are given for each distinctive line of trade, but in determining what articles

should be included under the various headings we cannot find that they have carefully consulted the various manufacturers or traders, nor have they been guided by representatives of manufacturers or traders as to what constitutes a distinct line of trade.

On this point, in the Thurber case, the Commission said:—"Carriers are not at liberty to classify property as a basis of transportation rates and impose charges for its carriage with exclusive regard to their own interests, but they must respect the interests of those who may have occasion to employ their services and conform their charges to the rules of relative equality and justice which the Act prescribes."

Discrimination.

The granting of mixed carload rates to one set of shippers and refusing the same to others, subjects the latter to a disadvantage amounting to undue discrimination, as the following instances will show:—

Under the classification to-day, as applied to and between points west of Port Arthur, a shipper of hardware and iron is permitted to include in mixed carloads shipments of scales, but a maker of scales who also makes stoves and sells to the same consignee, is refused a carload rate upon a mixed shipment of stoves and scales.

A shipper and dealer in plumbers' crockery who manufactures furnaces and certain heating apparatus is refused a mixed carload rate, but his competitors in trade are permitted to ship plumbers' crockery in mixed cars with lead goods and other hardware articles at a carload rate. The furnaces may also be shipped in mixed cars with tin buckets and a variety of other goods, but not with the plumbers' crockery.

Agricultural implements may be mixed in carloads with windmills, wheelbarrows and a variety of articles at carload rates, but a maker of fanning mills, which are in the agricultural implement list, who also makes farm truck scales and sells through the same agency, is refused carload rating on his united shipments. Yet scales may be shipped in mixed cars with nails or wooden tubs.

A shipper of petroleum products is not given a carload rate upon mixed carloads of oil and paraffine wax and candles, although these articles all rate fifth class in carloads; yet the paraffine wax and candles, by-products of petroleum, may be shipped in mixed cars with sugar or cordage.

Stoves and practically all lines of general hardware are rated fifth class, carloads, and these goods are to be found together in the stock of any hardware dealer in the country. The railways, however, refuse to apply carload rates to stoves when included with hardware. But a mixed shipment of stoves and milk cans or sap pails is permitted.

Saddlery hardware is listed under saddlery, fourth class. If a manufacturer of this hardware, who also makes other grades of hardware classifying fifth class, wishes to ship a mixed car, although willing to pay the higher rate on the whole, he is not permitted to do so under the classification as at present.

Electrical machinery, such as dynamos, transformers, etc., are placed under the heading of electrical goods, and the engines to operate them under the heading of machinery; consequently, if a shipper desires to forward an electrical plant complete he cannot secure a mixed carload rating.

A maker of refrigerators, screen doors, windows, wire mattresses, and wire cots, is unable to secure a mixed carload rate upon the products of his factory, because the railways have placed these goods under separate headings in the classification.

Another maker of wooden goods finds some of them listed under woodenware and others under joiners' work and is consequently refused a mixed carload rating.

The maker of picture moulding, picture frames and picture backing is unable to ship in mixed carloads at the carload rate because these goods do not appear in the classification under one heading.

A factory turning out wooden churns, wooden washing machines and wooden pumps, is without mixed carload rating be-

cause these goods do not appear under one distinctive heading; yet the railways do not object to mixed carloads of washing machines and pickle kegs.

A factory producing an assortment of hardware goods, including iron castings, stoves and iron beds, is unable to secure a mixed carload rate when shipping to their agencies, because the railways have put these goods under several headings; while some of their competitors in trade who make some of the same and other lines are given mixed carload ratings.

It is unnecessary to continue the enumeration of these absurdities. It must be obvious that when one shipper is permitted to combine certain articles in mixed carloads and a manufacturer who produces the same goods with others is refused the privilege, he is disadvantaged in the markets.

Section 253, sub-section 1, of the Railway Act, reads:—"And no company shall make or give any undue or unreasonable preference or advantage to or in favor of any particular person, or company, or any particular description of traffic in any respect whatsoever."

The situation to-day is most aptly stated in a report of the Interstate Commerce Commission in the case of *Martin v. Southern Pacific Railway*, 2 I.C.C. Rep., p. 2, as follows:—

"The manner in which this subject has been treated by the different railroads of the country has led to great confusion, which will continue until a common principle is established. . . . The aggregate amount of shipments in mixed carload lots upon all the lines in the country is considerable. The inconsistencies in the treatment of such shipments by different carriers under different classifications, and frequently by the same carrier, where different classifications are used for the different destinations, have been a source of constant annoyance to the community, and have constituted one of the little things, the multiplication of which has tended to create and intensify a feeling of irritation on the part of the public against railroads and their managers. It is excessively annoying for a shipper who has made up a carload lot in the expectation of receiving a carload rate, to find that a few more dollars are exacted because the rule in force upon some road prohibits the carload rate in case more than one kind of article is embraced in the shipment, although no substantial increased expense to the carrier is involved; and it is still more annoying to find that a rate apparently shown by the tariff sheets of the carrier at the shipping point is not sufficient to obtain the delivery of the goods at destination. . . .

"This whole matter is in a state of elaborate and unjustifiable confusion. It should be taken up at once by the various traffic managers and associations controlling classification in different parts of the country, and a common rule immediately established. Such a rule, in order to be satisfactory and just, should be precisely fair as between the shipper and the carrier, easily comprehended in its terms, reasonable in its nature, and applicable throughout every shipment without change."

There does not seem to be any sound reason why carload rates should not be applied on mixed shipments of goods which aggregate a carload quantity when forwarded at one time. Certainly a difference between rates on a so-called straight carload and a mixed carload is not justified by any actual railway consideration. The cost of handling the mixed carload is no greater. It is taken in the same train with straight carloads. The service is identical at the point of shipment, on the line and at the point of destination, as that which is rendered in the case of a straight carload. The railway receives revenue for the mixed car on the basis of the carload rating for the highest classed article in the shipment. The shipper secures no advantage when he sells the goods in competition with others who are shipping either in so-called straight carloads at the carload rate or in mixed carloads under the group headings at the carload rate. Manufacturing in Canada is largely confined to Ontario, Quebec and the Maritime Provinces, and owing to the limited markets it is not possible for a manufacturer always to confine his operations to the production of one line or grade of article. Most manufacturers have to employ their capital in the production of a varied

line of goods or to work up by-products from their factories in order to produce the volume necessary to ensure a reasonable return on the capital invested. These goods must be sold and marketed together. This is particularly applicable to the territory west of Port Arthur. The very high less-than-carload freight rates applying to and within that territory make it practically impossible to do business in less-than-carload quantities, as such shipments could not compete with similar goods transported at carload rates, and the market conditions are such that in nearly every case of manufactured articles mixed carloads have to be shipped.

Restriction of Trade.

The granting of carload rates to one set of shippers and refusing to another not only amounts to discrimination, but tends to narrow and restrict competition in trade, and this is not in the public interest. When freedom of trade is prohibited by arbitrary adjustment of rates by railways, it invariably results in additional tax on the consumer.

On this point the Commission has said:—"If carriers are allowed to make differences and see fit to do so regardless of the effect upon shippers and localities, the ultimate result must be that the bulk of the traffic will be handled by comparatively few shippers of freight and to large centres. We cannot believe that such a result was either intended or desired by the framers of the regulating statute."

And further, in 10 I. C. C. Rep., p. 243, *Glade v. B. & O. Ry. Co.*, the same principle is upheld, the opinion reading:—

"We do not consider it at all clear that the interests of the public in the true sense of that term would be subserved by a reduction in the number of shippers and shipping points. On the contrary, we think such interests demand that all persons wishing to ship goods to market shall be given a reasonable opportunity to do so. Competition is considered a public benefit, and the greater the number of shippers, the greater the competition among them will probably be. If defendant can say that the man who has only one carload to ship shall not be allowed to ship it, and confine the privilege of shipping to those who have two carloads or more, and then justify the discrimination by claiming it will cause an increase in the tonnage shipped, he can still go further and say that only those who can ship in full trainloads shall be allowed to engage in the business of shipping. No argument is necessary to show that such action would be unreasonable, and, therefore, unlawful. An increase instead of a decrease in tonnage might result from an increase in the number of shippers. The fewer the number of shippers, the greater the opportunity for manipulating the market and decreasing the tonnage."

Free competition in trade is, therefore, held to be in the public interest, and should be encouraged, rather than reduced by arbitrary railway regulations.

Is it fair that the railways should be permitted to lay down the arbitrary rule that to some they will give the mixed carload rate, while to others they will refuse it; or that a manufacturer or shipper before deciding upon the commodities he proposes to manufacture or ship shall be in the position of having to appeal to the railways for the privilege of shipping in mixed carloads at a carload rate, the same as his competitor who may be fortunate enough to find his goods under one distinctive heading in the classification?

The opinion of the Canadian Board of Railway Commissioners, Case No. 124, in the matter of the application of the Grand Trunk Railway, includes the following:—"Common carriers are bound by every principle of justice and of law to accord equal rights to all shippers who are entitled to like treatment, both in the receiving of supplies and in the shipment of their products; and a carrier who, under any pretext whatever, grants to one shipper an advantage which he denies to another, violates the spirit and thwarts the purpose of the law."

If the mixed carload privilege is fair to one set of traders, it

is fair to all; if it is fair in one part of the country it is fair in all.

The application of carload rates to mixed carloads has been upheld by the State Commissioners of Illinois, the Legislature of Missouri and the North Carolina Corporation Commission. It is general in the Official (U.S.) Classification which applies in the territory east of Chicago to the Atlantic seaboard, in which the greatest volume of traffic is moved by American railways, and also applies under the Canadian Classification in all of the territory east of Port Arthur. The Board of Railway Commissioners have now been asked to apply the rule to the territory west of Port Arthur, so that when carloads are shipped by one shipper to one consignee a carload rate will be applied on the basis of the highest classed article in the car.

BRITISH VS. U. S. STANDARDS OF MEASUREMENT.

Editor INDUSTRIAL CANADA:

Dear Sir,—Referring to the letter of Mr. Samuel S. Dale which appeared in your issue of September, 1905, there are a number of misleading statements that will be evident to the careful reader, and need not be noticed here. There is, however, one point that I wish to call attention to, namely, the statement that certain English standards have been carelessly handled by Washington officials who "actually shipped them by express to Buffalo and St. Louis on the pretext that they were worthless."

The standards that Mr. Dale doubtless refers to are the Troughton scale, which was accepted as the most authentic representative of the British yard in the United States from 1831 to 1856, and a copy of the British Imperial yard made in 1845 and presented to the United States by Great Britain in 1856, which was regarded as the most authentic copy of the British yard until 1893, when, for reasons that will be given later, it was decided by those in charge of the United States' standards that the U. S. yard should be referred to the international meter according to the relation fixed by Act of Congress passed in 1866. According to this Act the yard is equal to $\frac{3600}{3937}$ meters. Neither of the two copies of the British yards referred to was ever adopted by Congress, but merely by the U. S. Office of Weights and Measures, and therefore this office was at liberty to discard the two yards in question whenever it was deemed advisable. This action was not hastily taken, but thoroughly considered for a number of years by responsible officials cognizant of all the factors to be taken into account.

The reason for referring the United States' yard to the international meter is that the British yard and its copies had shown considerable variation when compared with one another from time to time, finally leading to the suspicion that neither the British Imperial yard nor its copies are constant. These standards were made sixty years ago of copper, zinc and tin, forming an alloy now known to be very unsuitable for standards of length. The divergencies which Mr. Dale is pleased to refer to as "negligible" may be so from his standpoint, but certainly not from the point of view of manufacturers of delicate instruments and machinery.

The international meter on the other hand represents the latest advances in metrology and is far superior to the Imperial yard as a standard of length. Contrary to Mr. Dale's statement no evidence has ever been produced to show that it differs by a measurable quantity from the original meter made over one hundred years ago. There was every reason, therefore, to fix the value of the yard in terms of the international meter rather than depend upon a standard known to be inferior in every respect. Moreover, the relation fixed by the Executive Order making the meter the fundamental standard, was that adopted by the United States Congress in 1866, and represented the true relation as closely as it was possible to determine it. The only ground for the statement that the U. S. yard based upon the international meter differs from the Imperial yard is that a comparison made in 1896 between the British Imperial yard and the international meter gave a result which differed by 1-10,000 of an inch from

that accepted in the United States, but since successive comparisons of the British yard and its copies show differences one and one-half times as great as this quantity, it cannot be said with certainty that there is a difference between the British and American yards. The most that can be said is that at the time the comparison was made, the British yard was 1-10,000 of an inch shorter, but aside from the possibility that this difference is due to the variability of the British yard, the lines on these yards are so coarse that it is impossible to get results that can be relied upon to the 1-10,000 of an inch.

Although one of the yards exhibited at Buffalo and St. Louis was discarded fifty years and the other twelve years ago, they are highly prized and are always carefully packed for shipment. As for the actual standards of the United States they are kept in a fire-proof vault especially constructed for the purpose in the new Physical Laboratory building of the Bureau of Standards at Washington, where it was my privilege to work nearly two years. A visit to this institution will, I am convinced, satisfy any unprejudiced observer that none of the official standards of the United States are in danger of injury by reason of careless handling, and also that the United States has a very much more invariable yard than the British bronze standards.

Respectfully,

KARL E. GUTHE,

Professor of Physics,

State University of Iowa.

Iowa City, Iowa,
October 25, 1905.

SCIENTIFIC NOTES.

Aluminum Paper.

Aluminum paper is now manufactured in Germany and recommended as a substitute for tin foil. It is not the so-called leaf aluminum, but real paper coated with powdered aluminum, and is said to possess very favorable qualities for preserving articles of food, for which it is used as a covering. Chemical analysis has proved that aluminum paper contains but few foreign substances; occasionally it may contain up to 2 per cent. of iron, but never any arsenic or other poisonous metals. Hence it appears that the powdered aluminum used for the manufacture of aluminum paper is relatively pure. The paper used is a sort of artificial parchment, obtained through the action of sulphuric acid upon ordinary paper. The sheets are spread out and covered upon one side with a thin coating of a solution of resin in alcohol or ether. Evaporation is precipitated through a current of air and the paper is then warmed until the resin has again become soft. Then powdered aluminum is sprinkled upon it and the paper subjected to strong pressure to fasten the powder thereon. The metallic covering so obtained is neither affected by the air nor by fatty substances. Aluminum paper is much cheaper than tin foil, and will, it is thought, become a strong competitor thereof.—*Chamber of Commerce Journal*, London.

New Process of Galvanization.

Mr. Cowper Coles, an Englishman, has invented a new process of galvanization, and has recently demonstrated the same with samples of iron, copper, aluminum, and other metals. The objects to be galvanized are simply heated to 260° in a bath of zinc vapor, the duration of which depends upon the desired thickness of the coating, but which is always short. After heating the objects are thoroughly coated with a layer of zinc, which on the surface has formed an alloy with the other metal by penetrating into it to a considerable depth. A great advantage of the process lies in the evenness of the coating, which is so perfect that such zinc galvanized screws and bolts afterwards fit perfectly into the nuts, while with other methods they have to be polished. It is also very convenient that the objects to be galvanized have not first to be cleaned. The retorts in which the heating takes place are of iron, and are heated from the outside. Another peculiar advantage is that the zinc does not adhere to the walls of the retort, but that these, after months of use, are entirely clean.—*U. S. Consular Report*.

LABOR COLUMN.

METALLIC BOYCOTTERS MUST PAY HEAVY DAMAGES.

The finding of the jury in the case of the Metallic Roofing Co. v. The Amalgamated Sheet Metal Workers' Union, and the direction of the court in accordance therewith, mark the conclusion of one of the most important legal battles between capital and labor that Canadian courts have ever been called upon to deal with.

The trouble originated away back in June, 1902, when the union called upon all employers of sheet metal workers in the city to sign an agreement binding themselves to an increased scale of wages, a reduction in the hours of labor, and to the employment of none but union men. This agreement was readily signed by every handler of sheet metal in the city except the Metallic Roofing Company, who signified their willingness to comply with the first two conditions, but absolutely refused to be dictated to in the matter of whom they should employ. A strike was accordingly declared, and to all intents and purposes it is still on. As regards the operation of the company's works it soon ceased to have any effect, for a full complement of workmen was secured without difficulty, and the plant has been running without interruption ever since.

Not content, however, with a formal declaration of hostility, the union decided to maintain a vigorous boycott against all goods of the Metallic Roofing Company, and their Secretary sent notices to every sheet metal contractor in the city that on and after August 20th of that year his men would absolutely refuse to handle any product of this company, as they were unfair to organized labor. In consequence of this action one firm who were under contract to complete a certain job by a certain date, and who had partly completed it when this notice was received, notified the union that they would seek redress through the courts for damages sustained. Other firms were obliged to ask the Metallic Roofing Company to take back goods which they had purchased from them, as they found it impossible to get men to work on them. The company did so. Meanwhile an inflammatory circular was sent to every trade unionist in the city, condemning the company as unfair and inviting co-operation in forcing them to terms.

When the company decided to take action for the recovery of damages, they were confronted with the difficulty that an unregistered union could not be sued. They were not a corporation, neither could they be regarded as a partnership; in the eyes of the law, therefore, they had no status. For a similar reason the International Association, with headquarters in Kansas City, could not be sued, though a court was held in that city and the books of the Association impounded in order to establish a connection between the parent and the branch organizations. Application was then made first to the Division Court and afterwards to the Court of Appeal, which authorized the company to sue "Local Union No. 30, Amalgamated Sheet Metal Workers' International Association, and William Jose, Richard Russel, S. Cox, W. C. Brake, J. S. Chapman, J. H. Kennedy, J. S. Annable and all other persons constituting the said Local Union No. 30, Amalgamated Sheet Metal Workers' International Association."

By the finding of the jury in the representative action which the company took in accordance with the instructions of the Court of Appeal, they were awarded \$7,500 damages and a perpetual injunction guaranteeing them protection from interference of a similar character for all time to come. Application was then made on behalf of the plaintiffs for a direction from the court in accordance with the finding of the jury, and this was delivered on November 11th. It was held that the decision in *Quinn v. Leatham* (1900) A.C. 495 applied, and judgment was entered for the amount assessed, with costs against the defendants individu-

ally and as representing all persons who on August 7th, 1902, constituted Local Union No. 30, and the International Association itself. All assets of either association in the hands of the defendants or of third parties in trust were declared liable to satisfy judgment. An injunction was granted perpetually restraining the defendants from conspiring to injure the plaintiffs in their trade, and from interfering with plaintiffs' workmen and inducing them either to break their contracts of employment or not to enter into same with plaintiffs.

WINNIPEG PICKETS ARE FINED AND WARNED.

On September 15th last, the union printers in Winnipeg went out on strike for an eight-hour day. A large number of shops were affected, among others that of The Stovel Co., who were successful in filling most of the vacancies with non-union men. The latter, however, were not allowed to work unmolested, but were accosted almost every day by union pickets, who tried to persuade them to throw up their jobs and help the union enforce its demands. At the instance of one of these workmen, two union pickets were arrested, and the case was tried before Magistrate Daly, who found in favor of the complainant.

In delivering judgment, the Magistrate stated that there was no doubt that the offence complained of had been committed and that it was an indictable one for which he could inflict a fine or imprisonment. The complainant had entered into a solemn contract, produced in court, with the Stovel Company, to perform certain work, and he must either do this or suffer the penalty. This was a free country and the complainant had a perfect right to sell his labor to anyone he pleased and at any price he pleased. This had been the first offence of the kind coming to the notice of the Court. The young men charged with the offence had not acted in an ungentlemanly manner in pursuing the task of "picketing," to which they had been assigned by others, at whose instance the interference had been made. In view of these facts he would impose a light penalty, fining them only \$5 and costs each, but he wished to point out that there must be no further complaints of similar action, otherwise those appearing before him would be dealt with more severely.

THE NANAIMO STRIKE.

Now that the coal miners' strike at Nanaimo has happily become a thing of the past, the miners must be puzzled to know what they gained by it that at all compensates for the loss of money, the inconvenience, and, in many cases, hardship, resulting from it. At best a strike is a clumsy weapon. It hurts the hand that wields it usually more than it injures the person at whom it is aimed, while it almost invariably causes distress and suffering among innocent and helpless people. The strike ought to be the last resort. Too often it is the first.

The Nanaimo miners, who, by the way, have conducted themselves during a trying period with a degree of self-respect which commands esteem, did not seek the conditions out of which the strike originated. Neither did the Western Fuel Company. The relations between that company and its employees were in every respect satisfactory until an irresponsible agitator threw a bone of contention in between them in the shape of a needless piece of legislation. The consequence was a loss to the miners of a sum of money which, if it had been collected from them as a tax extending over a term of years, would have caused a protest almost equal to rebellion. If the nation had been involved in a great war the financial loss to the people of Nanaimo would have been trifling compared to that resulting from the recent strike. Have the sacrifices made by the miners gained them anything at all

commensurate with them? Have they secured anything that might not have been gained by negotiation? These are questions which not only the people concerned in the strike, but all other wage-earners ought to ponder over—and not only wage-earners, but all classes of the community.—*The Victoria Times*.

THE PRINTERS' STRIKE IN WINNIPEG.

Mr. Charles Brunning Tells of the Defeat of the Eight-Hour Movement, and Makes Some Interesting Suggestions.

The Prairie City is a Union stronghold. Its isolated position enables the various labor organizations to formulate demands with some degree of certainty that they will be met, for Winnipeg presents great difficulties in securing skilled labor during periods of strikes. The forward policy of Winnipeg insists that nothing be done to stop for one moment its rapid development as the metropolis of the West. Any disruption 'twixt capital and labor must therefore be speedily settled. Winnipeg cannot wait.

The officials of the International Typographical Union were fully determined that Winnipeg should be the first city in the Dominion to yield to the eight-hour day demand. With Winnipeg off their hands Western Canada was practically settled. The moral effect of the victory would be great, for all eyes in Canada are constantly on Winnipeg. In that Paradise of workers—a veritable stronghold of Unionism—would quickly mature the seedling for the eight-hour day.

Winnipeg had to be won at all costs.

The ultimatum was handed the employing printers, and the men went out. Three newspaper offices immediately yielded the men's demands. One or two smaller houses accepted the terms of the strikers, but, to the surprise of the Union, the bulk of the printing houses stood firm!

The open shop was announced and extensively advertised. The master printers had taken the only stand they could take. Fettered with most absurd regulations of the Unions, all felt that for years their composing rooms had not been their own. The limit of endurance had at last been reached. They declared for the principle of no interference, and set about filling the vacancies as best they could. I happened to be in Winnipeg at the time, and met the employers.

For some years I have studied the industrial and commercial conditions of Great Britain, and know every important centre. I have also been interested in the gradually expanding emigration movement towards Canada, and have often wished that more definite action might be taken towards securing for this country the skilled mechanical labor which can readily be spared from the Motherland.

Present the opportunity to the skilled mechanic of Great Britain, and he will come in his thousands. He has no inclination for the 160 free acres of the North-West, but the freer life of the Canadian cities, the higher wages, and the chances of rapid advancement appeals to him. Occasionally he pulls up stakes and crosses the Atlantic, depending on his own pluck and initiative to secure him work on arrival.

I left Winnipeg on Sept. 25th, and arrived in Liverpool Oct. 9th. Within one fortnight I had secured the services of 51 skilled printers for Winnipeg. I had over 1,200 applications, and out of this number I was enabled to secure the best men in the trade. Each man paid his own passage out, and most of the men travelled second cabin. All had sufficient money to see them through, and considering the cost of outfit and other expenses, an average of \$80 to \$100 would be spent by each man in order to get to Winnipeg. My advertisements clearly and distinctly stated that no assisted passages would be given. All the men, moreover, were of the right type, young, healthy, intelligent, and adaptable. The utmost interest was evinced regarding the style of work expected from them, and each man engaged was picked with the one idea of his suitability.

During the fortnight I was in England I had to fight the most

strenuous opposition on the part of the English Trade Unions, who were working hand in hand with the International Typographical Union of America to prevent men from leaving the country with my party. Warnings were issued and despatched to all the papers carrying my advertisements. Paragraphs also appeared in the various labor journals, and the columns of the big provincial editions of the daily papers all contained warnings to printers to keep away from Canada owing to the strike. A mass of literature was sent all over the country, and the rigors of the Canadian winter were exaggerated.

I based the whole business in making engagements with the men on the perfectly legitimate right of the employing printers of Winnipeg to make whatever contracts they chose with those who were willing to accept them, and I resolutely refused to discuss matters at all with the Union officials in England, although one official pathetically remarked that if I would only insert a certain clause in the contract he would supply me with 200 men from the Liverpool district alone.

My party left Liverpool on Oct. 26th by the "Virginian," and arrived at Quebec on Friday, Nov. 3rd, where they entrained for Winnipeg, reaching the Prairie City the Monday following. The men started work the next day, and were loud in their praises of the way everything represented them had been faithfully carried out. On the other hand, the employers were equally well satisfied with the men, and the general opinion seemed to be that a smarter body of English workers had never before been seen in Canada.

I am firmly convinced that should the Union induce any to break away from their contracts, the majority will faithfully abide by the conditions under which they were engaged.

The failure of the International Union to win the Winnipeg stronghold proves conclusively that wherever unreasonable demands of labor are met with strong and decisive action, the strikers must lose. The fact that men will come 5,000 miles to an entirely new country is further proof that conditions of labor in the old country are such that men can easily be spared for Canada.

The alien labor law effectually precludes the importation of men into Canada from the States. No such law applies to Great Britain. I would suggest that a bureau be established in England to deal with the requirements of labor on behalf of Canadian manufacturers. The best men would be sent from the old country, and the utmost care used in their selection. Many a good man, whom Canada would welcome with open arms, is prevented from leaving the old country on account of the uncertainty of securing work on arrival here. Private emigration agents promise anything and everything in order to book passages and secure the commission. Thus worthless and indifferent workmen leave by scores each week. They only fill the ranks of unskilled labor on arrival.

In the great industrial struggles 'twixt capital and labor which are to come, it is to the open shop the employers must direct their efforts. The workman must be taught that a better state of individual efficiency will bring a higher standard of remuneration, and that the good workman is worth more to his employer than the indifferent workman. The whole principle of shorter hours is fundamentally wrong, for the man who loves his work places no time limit upon it.

Industrial Canada is proceeding at such a rapid pace that unless some counteracting influence be brought to bear at the present juncture, all the history of the labor wars of the States will be repeated in this country. England offers a solution to the difficulty. Her sons are eager and willing to cross the ocean, to settle in Canada, and become good Canadians. Much money is spent by the Canadian Government in inducing the practical agriculturist to settle on the rich soil of the Great North-West. Private enterprise might find it profitable to assist the willing and competent worker to settle in the manufacturing districts, for a constant demand for skilled labor—notwithstanding the occasional wails sent by the Canadian Unions across the Atlantic warning men to keep away—exists throughout the Dominion, and this demand is ever-increasing.

AMONG THE INDUSTRIES.

The Peterboro' Canoe Co. are adding a three-story extension to their factory, 125 x 25 feet, at a cost of \$4,000.

The Norton Mfg. Co., Hamilton, is building a \$10,000 three-storey brick addition to its factory on Emerald Street.

The Dominion Bridge Co., Ltd., of Montreal, has decided to establish a branch plant in Winnipeg for the manufacture of steel.

Messrs. Henrick and Pace are about to start a plant in Revelstoke, B.C., for the manufacture of exhaust systems for sawmills, induced drafts for boilers and general ventilating and heating appliances.

The Dominion Thread Mills have let the contract for their new factory in Stratford, Ont. It will be 243 feet long by 84 feet wide, with power house additional. Dr. Beattie Nesbitt, of Toronto, is President of the company.

The new sawmill and wood-working factory of Messrs. T. E. Babbitt & Son, St. Mary's, N.B., was put into operation on October 19th. It is probable that a sash and door factory will be added to the establishment in the near future.

The announcement comes from Victoria, B.C., that the T. Eaton Co., of Toronto and Winnipeg, has secured options on some valuable business sites in the centre of the city with a view to establishing a large department store there.

The Northern Engineering, Construction and Supply Co. has been organized by a number of Chicago capitalists, who propose erecting a foundry for the manufacture of structural steel at Fort William, Ont.

According to *The Maritime Merchant*, the William Richards Co.'s lumber property and mills on the Miramichi have been sold to Hugh K. Chisholm, of the International Paper Co., New York, and others, for \$600,000.

The Capewell Horse Nail Co., of Hartford, Conn., who some few months ago established a branch factory in Toronto, have now secured a controlling interest in the Maritime Nail Works, St. John, N.B. The concern is said to be the largest of its kind in America.

The Nasmith bakery business has been reorganized under the name of Nasmith's, Limited, with a capital of \$1,000,000. A nine acre site for their new factories and bake shops has been secured near the Dundas St. bridge, Toronto, where excellent shipping facilities will be available.

The Maritime Coal and Railway Co. have plans on foot for the erection of a big steam plant at their mines, Chignecto, with which to supply the city of Amherst with power. It is thought that about 2,000 horse power will be available. The company's mines are now producing 200 tons daily.

An Ontario charter has been taken out by a concern known as the Peterboro' Sandstone Brick Co., Ltd., whose authorized capital is \$50,000. They propose erecting a plant which will have a capacity of 15,000 brick daily. The brick will be made exclusively of sand and lime, put through a mixing and steaming process, and will be superior in many ways, it is claimed, to the ordinary clay brick.

Negotiations have been completed by the Transcontinental Railway Commissioners and the Canadian Northern for the construction of union terminals in Winnipeg. A separate company will be formed for the purpose, 50 per cent. of the stock in which will be owned by the Dominion Government, the balance to be held by the C. N. R. and such other railways as may decide to use the terminals. It is understood that at least two United States roads have signified their intention of becoming parties to the agreement. The depot will be the finest structure of the kind in Canada, and will cost between \$3,000,000 and \$4,000,000.

An amalgamation has been effected between the Hart Corundum Wheel Co. and the Canadian Corundum Wheel Co., both of Hamilton. The new concern will be known as the Canadian Hart Corundum Wheel Company, and will have a capital stock of \$75,000.

Messrs. P. Burns & Co., of Calgary, have secured a 20-acre site just outside the municipal limits of the town of Strathcona, upon which they purpose erecting large stock yards and an abattoir. This branch will form the centre of the company's operations in Northern Alberta.

The Canada Chemical Mfg. Co., Ltd., of London, have opened a sales office for Toronto and district in the McKinnon Building, Toronto, with Mr. Albert Nieghorn in charge. This is in addition to the distributing warehouse which they have for some time been operating in the same city.

The British Columbia Wire and Nail Co.'s factory at Vancouver was destroyed by fire on Oct. 30th, involving a loss of between \$90,000 and \$100,000, against which there was but \$18,000 of insurance. The industry was the only one of the kind in British Columbia, and had been in operation about nine months.

The Fielding Chemical Co., Ltd., is the name under which Guelph's latest industry is doing business. Mr. W. J. Fielding is Managing Director of the concern, which is capitalized a \$40,000. For the present their principal production will be amyl acetate, though later on they expect to engage in the manufacture of a wide range of finer chemicals. About 40 hands are employed.

The *Canada Gazette* announces the incorporation of the National Drug and Chemical Company, of Canada, Limited, with a capital stock of \$6,000,000. This company, it is understood, is a combine of a number of the largest wholesale and manufacturing druggists in the country. The head office will be in Montreal.

The Dominion Coal Co. is building a two-story brick and steel addition to its machine shop at Glace Bay, to be used for general foundry purposes. It will be completed in three months, and will cost \$25,000. Its equipment will include an improved sand blast for cleaning castings, a travelling crane and three pot brass furnaces.

The Rideau Manufacturing Co. have commenced work on the erection of a new four-story brick factory in Ottawa, which, when completed, will furnish employment to 400 or 500 hands in the manufacture of women's garments. The enlargement has been made necessary by their increasing trade in Winnipeg and the West, where they have recently opened a branch office. There is said to be \$1,000,000 behind the enterprise.

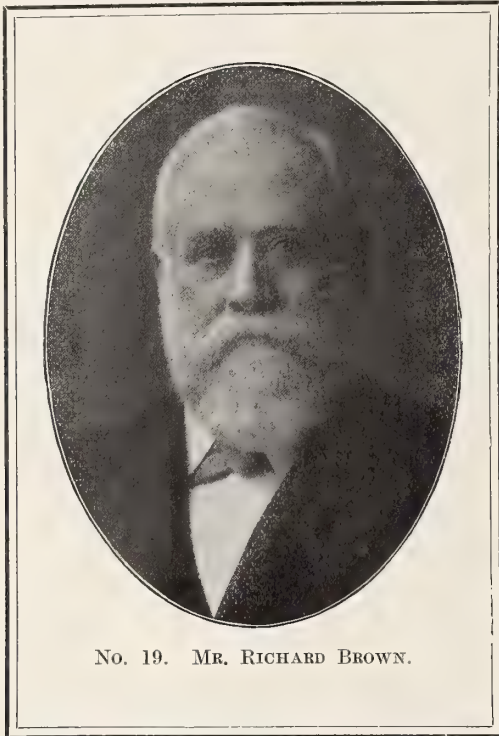
Development work is being actively pushed forward on the power project of the Great Falls Power Co., who control a valuable franchise on the Winnipeg River, and it is stated that in a short time fully 1,000 men will be employed. Machinery has already been purchased capable of generating 50,000 h.p., which will be the initial installation, though provision will be made in the hydraulic development for further sets of generators sufficient to bring the total power up to 150,000 h.p. When completed the plant will represent an investment of \$6,000,000.

What is said to be the greatest timber deal ever put through in British Columbia was recently consummated in Vancouver, whereby 43,000 acres of the finest fir and cedar limits in the world were disposed of to Minneapolis capitalists. The limits, which are on the east side of Vancouver Island, are said to contain the immense amount of 1,000,000,000 feet of standing fir and cedar of No. 1 quality. A mill will be erected and in operation within three years, capable of cutting between 40,000,000 and 70,000,000 feet per annum. It will probably be located at Vancouver, and will be exclusively for the export trade. The names of the purchasers have not as yet been made public.

THE MANUFACTURERS OF CANADA.

Fifty-seven years in business harness and still able to work ten hours a day for six days a week is the proud record of Mr. Richard Brown, head of the firm of Brown Bros., Limited, of Toronto.

Mr. Brown was born at Newcastle-on-Tyne, England, in 1834, and is therefore of the same age as the city of his adoption. He first made Toronto's acquaintance in 1846, when, with his parents, he set out for the metropolis of old Upper Canada, then a town of less than 25,000. For two years he busied himself with his books and studies, attending both day and evening school, with a view to qualifying himself for entering upon a business career. This he commenced in 1848, accepting a position with T. Maclear & Co., a well-known firm of booksellers on Yonge Street. Eight years later, in company with his brother, the late Thomas Brown, he established the firm of Brown Brothers. They first oc-



No. 19. MR. RICHARD BROWN.

cupied small premises on King Street East, where the King Edward Hotel now stands, subsequently removing to modest quarters on the north side of the street. In 1893 the business was turned into a joint stock company under the name of Brown Bros., Limited, with Mr. Richard Brown as President and Managing Director. In 1900 they moved into a magnificent new factory and warehouse on Wellington Street West, which was destroyed in the conflagration of 1904, only to give place to the present splendid fireproof structure of expanded metal and concrete, where upwards of 200 hands are kept busily employed.

The manufacture of stationery has almost become an instinct with the Browns, in whose family it dates back to the year 1774. One feature which has developed under the present firm is particularly worthy of mention—the publication of diaries. It commenced in a small way during the progress of the American Civil War and has continued uninterruptedly ever since, until to-day they are turning out annually some 200 different varieties.

Apart from the firm which bears his name, Mr. Brown's only business connection is with the Toronto Paper Manufacturing Co., Ltd., of which he has been a director ever since its establishment. Although his ability has been widely recognized and his advice and assistance eagerly sought by the boards of other companies, he has always felt that the affairs of these two concerns were all that he could properly attend to. For a similar reason he has

steadily declined municipal honors. The only exception he has made to this rule has been in regard to the work of the Methodist Church, of which he has always been a staunch supporter, and in whose service he is still most active. His kindly disposition and his unfailing courtesy have won him a host of friends in both business and social circles, whose wish is that he may be spared for many long years of useful activity.

LITERATURE FOR BUSY BUSINESS MEN.

The Industrial History of the United States, by Katharine Cowan. Macmillan's, New York. 1905. \$1.25.

It is a fascinating story—the expansion, organization and internal struggles of the wealthiest country on the globe. It teaches much, though it is hard to apply the lessons. And to-day, when the unprecedentedly high tariff has fostered tremendous combines that are steadily warring with each other, forcing new organizations to resist them, and leading to production on the biggest scale ever attempted, all bringing about an industrial revolution comparable to that resulting from the introduction of machinery a century or more ago. Accompanying this is the concentration of capital—the wealth of the United States has trebled since 1870 according to the census. In 1890 9% of the people owed 71% of the wealth, and the situation is probably worse to-day. The movement towards free trade along the anti-trust and reciprocity route is perhaps the most vital of all present movements, for it strikes at the root of much of the present evils of over-done protection, which harms alike the citizen at home and the dumping market abroad. A book like the one here under notice is only possible in a country where the government statistics are so replete. One sighs to think of the contrast in young Canada, where there is not a single trained statistician in the public employ.

Colonial Administration, by Paul S. Reinsch. Macmillan's, New York. 1905. \$1.25.

In some ways this is a remarkable book. It is the first book to give a survey of the tropical colonies of the world, from the Philippines to India, Africa and the West Indies.

The author believes that *Chamberlainism* (which he perhaps too narrowly understands as a system of Imperial preferences on grain) is overlooking conditions of international trade in the tropics. His remarks on this point, though stated briefly, are well worth careful reading. As a substitute for a review we may give a selection of the many excellent facts and observations on this and other matters:—Colonies whose chief wealth consists in raw materials have been frequently led (as have, e.g., Ontario, British Columbia, etc.) to impose export duties. Only 26% of the commerce of the United Kingdom is carried on with British possessions. France's colonial trade is only 8½% of her whole trade. In British colonial trade the colonies buy proportionately more of highly finished and therefore more profitable goods than foreign countries, that is, they buy from the Motherland very little raw material. The figures given on this point show how necessary it is to analyze trade returns before we can understand their true meaning. The author seems to overlook the probable effect of a preferential duty on grain in causing the export of all colonial wheat to the Motherland against colonial imports of foreign grain. Some curious and novel situations would doubtless arise in this way. He fears the danger through an Imperial tariff of subordinating East Indian life to the interests of the commercial class and of parliamentary politicians at home. The West Indies will always be commercially dependent on the United States, he believes, and the movement to improve communications with Canada cannot seriously affect this natural condition. Free trade there, he concludes, would be more helpful than greater restrictions.

In Africa the Cape to Cairo railway scheme, like the trans-Saharan, is not regarded at present as within the region of practical undertaking. The Porto-Alexandre-Ottavi-Pretoria line has, however, some chance of being built, as it shortens the distance

from London to the Transvaal by 1,200 miles, and traverses a rich mineral country. The author thinks the problem of through African transportation is for the present the best possible utilization of water stretches combined with interlinking railways. Egypt shows how irrigation can be made to pay, and English occupation of British East Africa, the re-conquest of the Soudan, the refusal to allow Marchand to gain a foothold on the upper Nile, and the building of the Uganda railway, were all part of the policy of safeguarding Egypt's water supply. The Assouan dam cost about £2,000,000. It increased the annual income of Egyptian agriculture by £2,600,000, and the government's revenues from taxes by £380,000! This compact volume testifies to the interest the great American people are beginning to take in colonies, and exemplifies the great service well directed academic investigation can render the State.

Elements of Sociology, by F. W. Blackmar. Macmillan's, New York. 1905. \$1.00.

Civics, Studies in American Citizenship, by W. H. Sherman. Macmillan's, New York. 1905. 90c.

Mr. Blackmar's little book, with its exceedingly well-selected list of references, is, perhaps, the best brief introductory to the study of society yet issued. Written in simple, direct English, its lucid presentation of the broad problems of industrial society makes good, at times eloquent, reading. Americans, to their credit,—and Canadians might take this to heart—are great readers of books about their own social and political institutions, and the volumes mentioned are good examples of recent useful publications on such subjects.

FOREIGN TRADE NOTES.

A Visitor from Trinidad.

Mr. T. Geddes Grant, who has been for a number of years a correspondent member of the Canadian Manufacturers' Association for the Island of Trinidad, B. W. I., is at present in Canada. The purpose of his trip is to visit the many manufacturers and flour, feed, grain and provision exporters with whom he does business, and also to get in touch with other firms wishing to cultivate trade in Trinidad.

Mr. Grant, in addition to carrying on a commission business in Port of Spain, has recently taken up the agency business and is covering a number of the other British West India Islands. The Association will be very glad to put any parties enquiring in touch with Mr. Grant.

Mexican Representation.

The Asociacion Financiera Internacional, Mexico, an organization for the purpose of providing capitalists throughout the world with reliable information concerning investments in the Republic of Mexico, in writing to a member of the Association stated that United States manufacturers exported into Mexico during the year ending June, 1905, \$48,328,623.60 worth of merchandise. This company offers its services to any firms desiring information about Mexico, and sends several references which are available on application.

Patent Kindling Wood.

A correspondent in Cincinnati, Ohio, has written the Association for information regarding the most suitable location for a factory to make patent kindling wood. The company who is interested in this wishes to locate in some centre with good facilities for exporting their product to England. The stock used is to a large extent waste, but small logs 8 inches and upwards in diameter, any length, can also be used. Thirty to fifty cords are required daily. The Association would gladly furnish the address to any party or municipality interested.

South African Notes.

Returns from South Africa continue to show a steady growth in Canadian imports. In 1896 our total sales to that country amounted to only £17,000. After the war in 1902, when a direct steamship service was established, they rose to £299,674. Last year the total reached £1,907,962. The principal articles contributing to this large amount are grains, flour, apples, cheese, hams and bacon, poultry, timber and furniture, most of which do not enjoy the preference, as they fall without the preferred items.

Mr. Charles M. Kittson, Canadian Commercial Agent for South Africa, is quoted by the Cape *Argus* as advocating a reasonable extension of the preferential treatment so as to include more of the articles in which we can most readily do business. Cape Colonists are not yet able to produce enough cereals to supply the wants of the population, and this year flour and meal will probably be imported to the value of three or four million dollars. At present the United States secures the bulk of this trade, but Canada and Australia could no doubt control it between them if the preference were extended.

Mr. Kittson has very kindly reminded the members of the Canadian Manufacturers' Association through us that shipping goods to South Africa on consignment is a mode of doing business that amounts in most cases to commercial suicide. He says there are undoubtedly some honest merchants in South Africa with whom such business would be quite safe, but in the large majority of instances consignments must be discouraged.

Canadian Furniture in Egypt.

Canada still sends furniture to Egypt, though we scarcely think in any large quantities, which is somewhat surprising in view of the prices at which the goods can be sold there. The styles are plain and rather heavy looking despite the fact that each article, as a rule, contains a certain amount of scroll work, which, however, is nailed on to it. The goods come over in entirely closed cases, and arrive in excellent condition. To give an example of what Canada can do in the way of prices, we may say that a bedroom set, comprising chest of drawers with mirror, wardrobe, washstand, and two cane bottom chairs, can be delivered in Alexandria at a price which permits the goods being retailed at £11. Similarly, a dining room suite, consisting of oak table, oak sideboard with mirror, and 6 leather seated chairs runs out at about £23 retail. Canada also supplies office furniture of all kinds, including roll top desks, at very moderate prices.—*British Chamber of Commerce, Egypt.*

Milan Exhibition.

Italy's first International Exhibition under the patronage of His Majesty, the King of Italy, will be opened in Milan on the 15th of April, 1906. The exhibition will be on a large scale, and the success of its international character has already been assured by the participation of France, Germany, Austria, Great Britain and the United States. The British Government has made a grant of £10,000 for the creation of a British section, and a determined effort will be made by her manufacturers to impress the Italian public with the superiority of their goods, and in this way recapture some of the trade which they have losing of late years.

Newfoundland's Tariff Changes.

The new Revenue Act, which recently came into effect in Newfoundland, makes comparatively few changes in the rates of customs duties. Anthracite and bituminous coal entering the harbor of St. John's are still taxed \$1.00 and 70 cents per ton respectively. At all other points the rate is 50 cents per ton, provision being made for the remission of the duties at any place other than St. John's, Harbor Grace, Carbonear and Placentia, upon satisfactory proof being furnished that the coal is intended exclusively for domestic use. Ploughs and harrows, formerly paying 10 and 20 per cent. *ad val.*, are now free, while sewing silk has been reduced from 40 to 25 per cent. *ad val.*

TRADE ENQUIRIES.

NOTE.—For further information regarding any enquiry mentioned under this heading or the names of enquirers, apply by number to the Secretary, at Toronto.

- 107 **AGENCIES—Capetown**—A South African firm of commission agents in **Capetown**, with branches at **Durban**, **East London** and **Johannesburg**, are desirous of representing on commission Canadian manufacturers and exporters.
- 108 **Durban**—A firm in **Durban**, **Natal**, would be pleased to represent Canadian manufacturers and shippers wishing to do business in **Durban** and the **Transvaal**.
- 109 **Worcester**—A correspondent in **Worcester**, **England**, is open to accept the agency for some good Canadian specialty. He is recommended to us as a reliable and desirable representative.
- 110 **Baskets, Fruit**—A general wholesale importer and exporter, established since 1871 in **St. Saviours**, **Jersey**, **England**, desires to purchase fruit baskets such as are generally used for grapes and tomatoes, about 10 to 15 pounds capacity. He asks for quotations per thousand delivered **London** or **Plymouth**. Offers to furnish either Canadian or **London** references, and will pay cash against bill of lading.
- 111 **Beans, Lentils, Cheese, Cod and other Salt Fish, Lard and Bacon**—A merchant in **Bari**, **Italy**, wishes to correspond with shippers of the above lines. He asks for prices c.i.f. **Naples**, and **Adriatic** ports. He does business on a commission basis, and pays cash against shipping documents. He sends five **English** references. Beans, lentils and other pulse he wishes to buy in bags of 100 kilos. Cheese should be strong and pungent for grating purposes. Fish in casks of 4 cwt., each order for which would not be less than 300 to 500 cwt.
- 112 **Bolts and Nuts, Wrought Iron Pipe and Fittings**—A **New York** firm of engineers have made enquiry for standard weight and extra heavy cast iron flanged and screw pipe fittings, and standard weight and extra heavy wrought iron pipe.
- 113 **Boots and Shoes**—A large **Australian** firm of shoe importers desires to secure the names of reliable Canadian exporters, one to make lower grade women's goods, and another a medium and better class. Goods must be stylish at popular prices.
- 114 **Boots and Shoes (Rubber), and Cotton Goods**—A firm of general merchants in **Apia**, **Samoa**, now purchasing Canadian boots and shoes in **New Zealand**, desire to purchase the same and also cotton goods direct. Their trade is mostly with natives, and cheaper goods are required. Some of their cotton goods in demand are prints, principally navy blue, not less than 30 inches wide, white calico, white sheeting, striped drill, etc. This firm is recommended by the acting **British Consul** at **Apia**.
- 115 **Doors and Mouldings**—A company in **Bath**, **England**, are open to purchase at present from 1,000 to 2,000 pine doors, 6 ft. 4 in. x 2 ft. 4 in. x 1¼ in. to 6 ft. 10 in. x 2 ft. 10 in. x 2 in., third quality, not more than ten knots showing on either side.
- 116 **Doors, Shovels, Pick, Hammer and Broom Handles, Spokes, Wheelbarrows, Wood Mantels, Chair Seats, Window Sashes, Window Shutters, Wood Butter Boats, Horse and Mule Shoes, Wire Nails, Wire Netting, Wash Boards, Trucks, Wood or Iron Garden Seats, Baling Presses, Hand Carts**—A correspondent starting business in **Capetown**, **South Africa**, with branches at **Durban** and **Johannesburg**, writes for the purpose of increasing his business with Canada. He states that **South Africa** offers a good field for Canadian trade at the present time. He has gone carefully into the possibilities in the articles mentioned, and full specifications of most of them are forwarded with enquiry, and in a number of instances cuts of exactly what is desired. Samples of some of the lines have been purchased and shipped, and will be available in the Association offices. He gives as reference the **Canadian Government Commercial Agent** in **South Africa** and the **Standard Bank of South Africa**, **Durban**.
- 117 **Flour**—A baker established in the wholesale and retail business in 1858 in **Nassau**, **N. P.**, **Bahamas**, **B. W. I.**, desires to purchase Canadian flour in 100 bbl. lots. Asks for prices f.o.b. **Montreal**, cash transactions.
- 118 **Flour, Bacon and Provisions**—A member of the Association forwards us the name of a **Belfast**, **Ireland**, merchant who desires to be placed in communication with flour, bacon and provision merchants. The object is to obtain the agency for such lines.
- 119 **Handles**—A company in **Bristol**, **England**, which has been buying pick, ash manure fork, hay fork, and basswood broom handles in **Canada**, but who latterly have not been able to get delivery, have made a request for the names of exporters.
- 120 **Handles, Pick, Hammer and Axe**—A **Capetown**, **South Africa**, commission agent desires quotations for hickory or other suitable hardwood pick, hammer and axe handles.
- 121 **Hardware, Metals, Machinery, Sanitary Goods, Engineers' Supplies and Electrical Goods**—A manufacturers' agent and colonial and foreign buyer in **Worthington**, **England**, offers his services as buying or selling agent for a Canadian firm. He has had a large experience in this line of business.
- 122 **Heads, Oak**—A **Manchester**, **England**, firm now dealing through brokers, wishes to buy direct from Canadian manufacturers oak heads in sizes 20½ inches diameter by ¾ inch thick.
- 123 **Merchandise, General**—A correspondent in **Turin**, **Italy**, has asked to be placed in touch with Canadian exporters, as he is seeking to extend the trade between **Italy** and the **Dominion**.
- 124 **Pipe (Wrought Iron) and Relief Valves**—A company of consulting engineers in **New York City** ask for the names of Canadian firms prepared to supply wrought iron pipe, extra heavy grade, about 8 inches in diameter, and automatic exhaust relief valves 24 inches and 26 inches in diameter.
- 125 **Pulp, Wood**—A manufacturers' agent in **Leeds**, **England**, writes to the effect that business could be done in Canadian wood pulp. The pulp imported at the present time is from **Scandinavia**. The correspondent is in close touch with paper mills throughout **Great Britain**, and is in a good position to introduce the same.
- 126 **Ropes and Cordage**—A correspondent in **Montserrat**, **B. W. I.**, asks to be put in communication with manufacturers of ropes and cordage. He wishes to handle the same on a commission basis.
- 127 **Spirits, Wood**—An enquiry has been received from **London**, **England**, asking for the designation and address of some Canadian company recently organized for the purpose of producing wood spirit.
- 128 **Spokes, Hubs and Splash-Boards**—A **Manchester**, **England**, firm desires to secure prices and description of the above from Canadian manufacturers of the same.
- 129 **Turned Wooden Goods**—A **Birmingham**, **England**, firm enquires for Canadian manufacturers of all kinds of turned wooden goods, particularly handles.
- 130 **Veneer**—A **North of England** furniture manufacturing company desires to purchase in **Canada** five-ply veneer used for church, school and theatre seating.

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EXPORT

Important Notice

The Canadian Government Agent for Victoria, South Australia, Western Australia and Tasmania, Mr. D. H. Ross, reports to the Government under date of August 7th, from Melbourne, as follows: (See Weekly Report No. 86, pages 150 and 151.)

"Small Canadian Manufacturers particularly require a commission house to promptly reimburse them for shipments, and to effect economies in transportation of their goods. It will never pay them to direct shipments, for they cannot be expected to know the export business; they are manufacturers, not shippers. Therefore, it is essential that not only the small, but the large manufacturers as well, should have the assistance of a shipping house, which would pay accounts, arrange freights and insurances, and make drafts upon Australian buyers in settlement of their account. It now affords me much pleasure to report that the **Imperial Export Co., Limited, of Toronto**, has recently established its Australian headquarters in Melbourne, under exceedingly capable management. A few days ago I visited the company's offices and commodious show rooms, in which are displayed a wide range of samples of Canadian manufactures. Other collections were being opened up, for the most part Canadian goods quite new to this country, and the entire display constituted an eloquent illustration of the manufacturing advances made in the Dominion during recent years. The office of the company is fitted with handsome Canadian furniture—in itself a striking advertisement—and hundreds of catalogues and price lists are classified in such a manner as to be readily accessible for reference. From Melbourne, the company purpose sending out commercial travellers to all of the principal importing centres in the Commonwealth.

We are doing this throughout **Great Britain, Australia, New Zealand, South Africa and the Argentine Republic**. We shall be glad to correspond with manufacturers who wish their samples shown in the above markets through the services of competent salesmen.

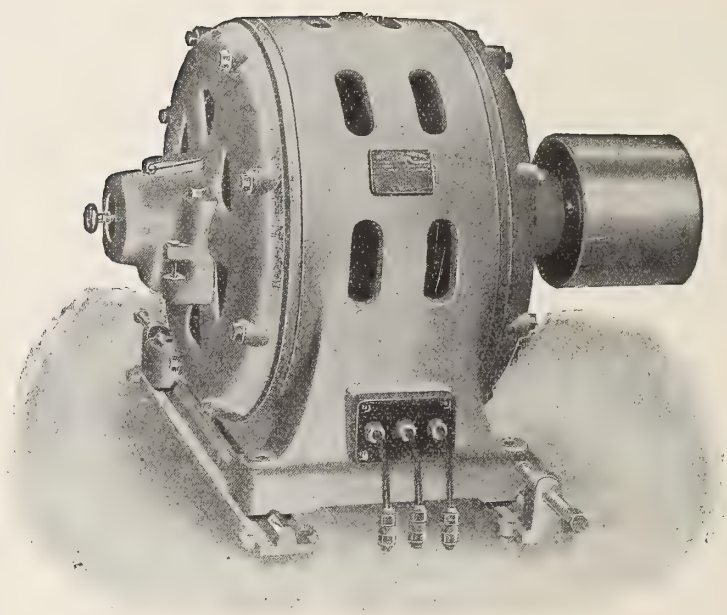
IMPERIAL EXPORT COMPANY, LIMITED

72 QUEEN STREET WEST

TORONTO, CANADA

All Manufacturers Using Electric Power Want a Good Motor

**D. C.
MOTOR
BULLETIN
No. 818**



**A. C.
MOTOR
BULLETIN
No. 822**

C. G. E. Induction Motor.

Our motors are the standard of the world.

Canadian General Electric Co., Limited

Head Office—Toronto, Ont.

DISTRICT OFFICES

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HALIFAX

OTTAWA

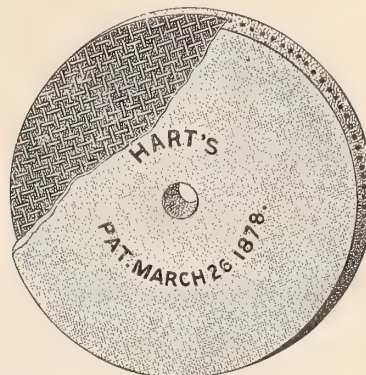
WINNIPEG

VANCOUVER

ROSSLAND

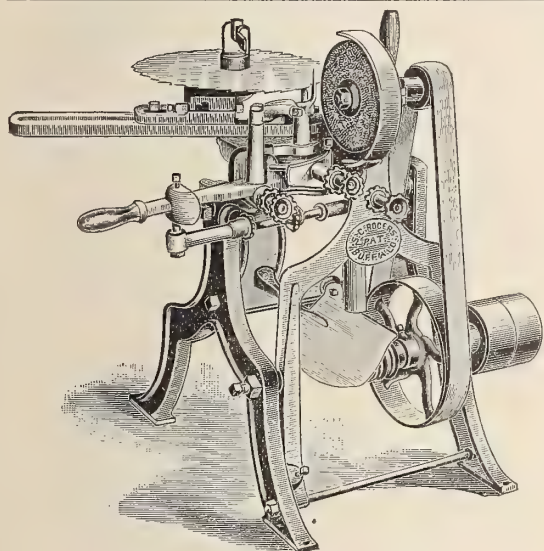
Hart Corundum Wheel Co., Limited

HAMILTON, CANADA



THE OLD RELIABLE

MAKERS OF CRAIG MINE CRYSTAL CORUNDUM WHEELS.



HART SAW FILER WITH AUTOMATIC ATTACHMENT.

No. 1 Automatic HART SAW FILER

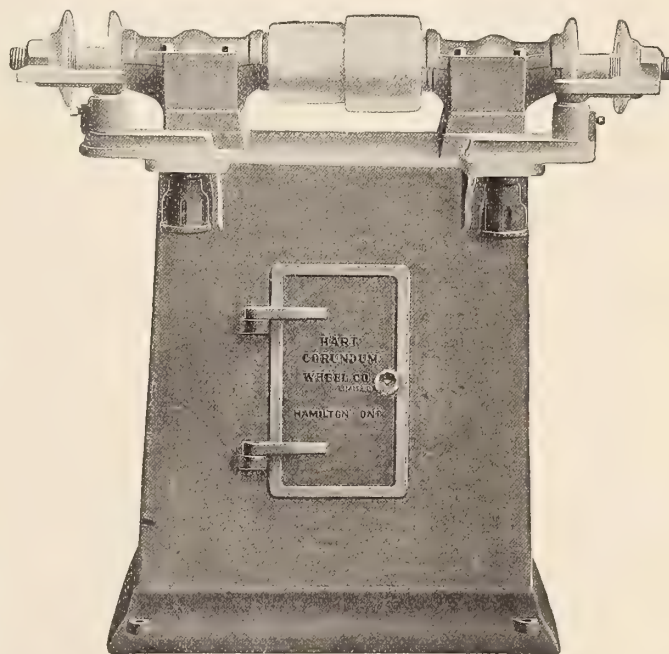
Simple in design and easily operated.

Finishes the sharpening complete, and does it better than it could be done by hand.

Will grind 45 teeth per minute.

Especially designed for Band Re-Saws.

The machine complete will be sent on 30 days' inspection and trial.



CYCLONE GRINDER No. 17.

CYCLONE GRINDER No. 17.

Built on scientific principles.

Bearings absolutely dust proof, automatic oilers.

To carry 2 wheels, 12 to 16 in diam., 3 in. thick.

Length of crucible steel arbor - 42 inches

Distance between wheels - 30 "

Diameter of arbor between collars $1\frac{1}{2}$ "

Size of bearings - 8 x $1\frac{9}{16}$ "

Size of cone pulley on arbor 5 and 6 x $4\frac{1}{2}$ "

Diameter of collar - 6 "

Height from floor to centre of arbor 35 "

Size of base - 23 x 27 "

Countershaft has cone pulleys 15 x 16 x $4\frac{1}{2}$ inch face.

Tight and loose pulley, 8 in. diameter, 5 in. face, and should run about 650 revs. per minute.

Prices on application.

Send for Catalogue

Export Orders
Filled
with Despatch



Cable Address
"Pure"
Western Union Code

WE ARE NOW IN A POSITION TO FILL ORDERS
FOR OUR MINERAL AND VEGETABLE PIGMENTS
AND DRY COLORS, ALSO FLEXIBLE PASTE COLORS
PRODUCED BY OUR PATENT PROCESS.

WE GUARANTEE THESE COLORS TO HAVE A PER-
MANENCY AND DURABILITY FAR SUPERIOR TO
ANYTHING HERETOFORE MADE.

SAMPLES AND QUOTATIONS CHEERFULLY FUR-
NISHED.

PURE COLOR COMPANY,

LIMITED

OFFICE AND WORKS

HAMILTON . . . CANADA

Headquarters for Greases

Cable
"Campbell"

We manufacture greases of all descriptions for every known purpose



Cup and Motor Greases
Hot and Cold Neck Grease
Journal and Roller Greases

Harness Oil
Harness Oil Blacking
Harness Soaps

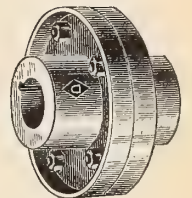
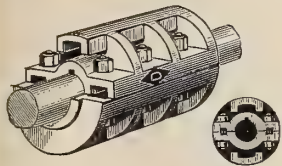
Leather preservers and belt dressings.

The above goods are put up in attractive lithographed packages.

The Campbell Mfg. Co., Limited

Hamilton, Canada

DODGE



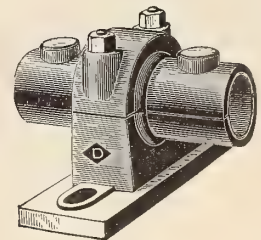
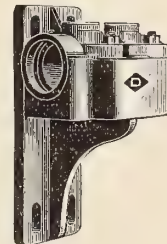
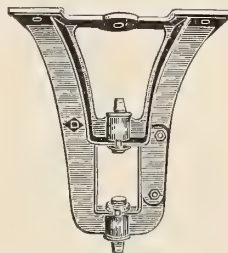
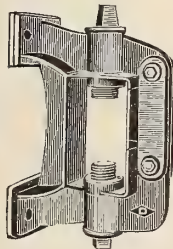
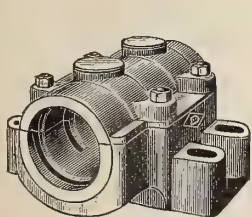
LINE



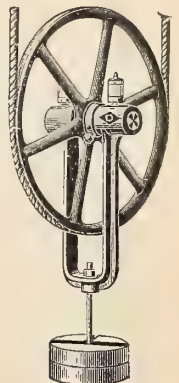
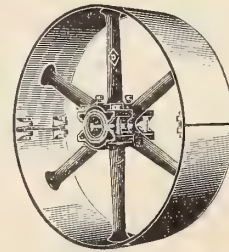
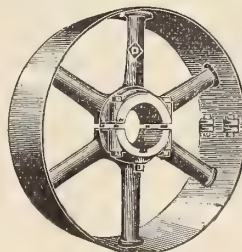
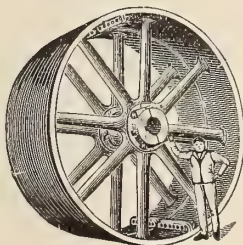
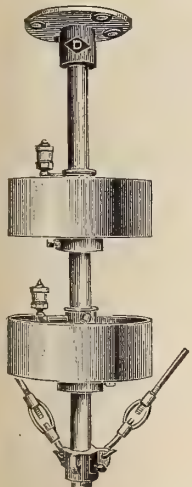
OF

HIGH GRADE TRANSMISSION MACHINERY

MADE IN CANADA



MODERN DESIGN



WE CARRY VERY LARGE STOCKS OF ALL STANDARD LINES
FOR QUICK SHIPMENT. ALL OUR OWN MANUFACTURE.

DODGE MANF'G CO., Toronto,

Montreal Branch
419 ST. JAMES STREET

The Chapman Double Ball Bearing

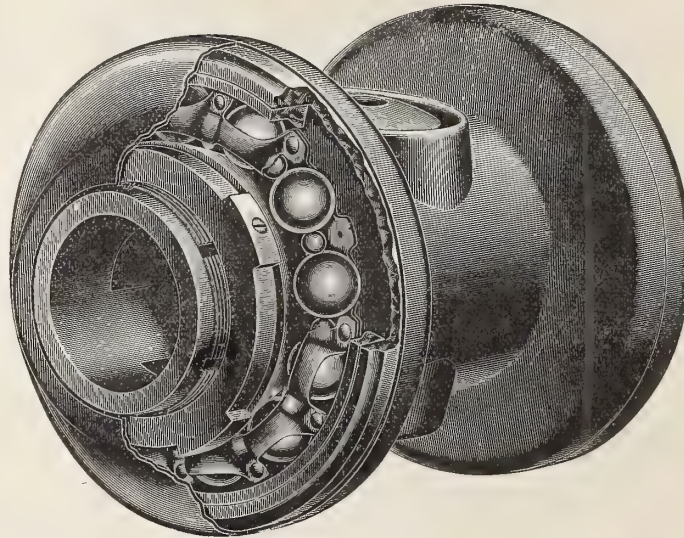
100 PLANTS EQUIPPED IN CANADA

A Bearing
Simple in Construction
and
Practical in Operation

"As near as we can estimate there is, we should think, at least fifty per cent. saving in power with the Chapman bearings.

"ALABASTINE CO., LTD.,
"Paris, Ont."

Durability and
Economy of Operation
Secure its Adoption



A Bearing having the
Highest Known
Efficiency
as a Power Saver

"We are of the opinion, in our case, that we save at least twenty per cent. in power with the Chapman Double Ball Bearing, and we also find a great saving in oil. The bearings are also clean; we have no oil running down hangers, posts, etc.

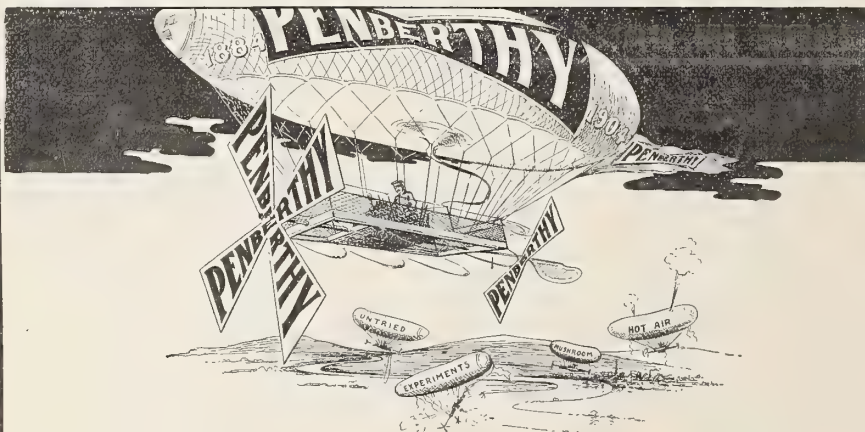
"Yours truly,
"McLAUGHLIN CARRIAGE
CO., LIMITED,
"Oshawa, Ont."

We Guarantee You
a Saving
of 75 per cent.
of Your Shaft Friction

THE CHAPMAN DOUBLE BALL BEARING COMPANY OF CANADA, LIMITED

Office—39 Scott Street,

Factory—39 Pearl Street, TORONTO



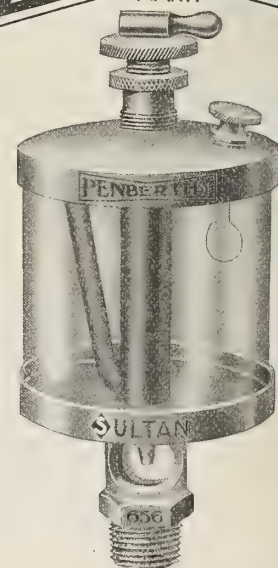
ABOVE ALL OTHERS

In Quality but not in Price

PENBERTHY BRASS GOODS

are made of the BEST red metal and finished by SKILLED WORKMEN. We have WHAT YOU WANT. Write us for our catalogue and be convinced that we can SAVE YOU MONEY.

Penberthy Injector Co., Limited
Windsor, Ont.

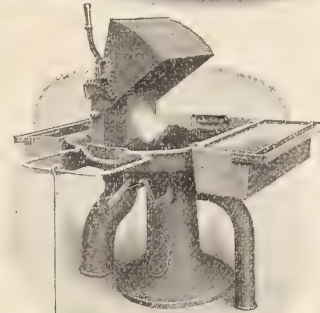
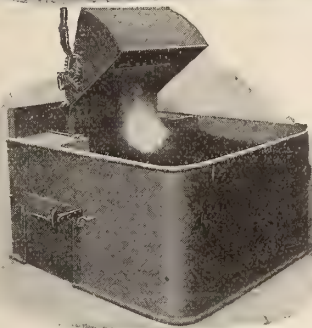


"SULTAN"
Gas Engine Cylinder
Oiler

BUFFALO DOWN DRAFT FORGES

NO SMOKE - NO OVERHEAD PIPES - NO REPAIRS

TYPES FOR ALL WORK, 60 SIZES. *SEE NEW CATALOGUE*



The Canadian Buffalo Forge Company, Limited

Engineers and Manufacturers

MONTREAL - - - CANADA.

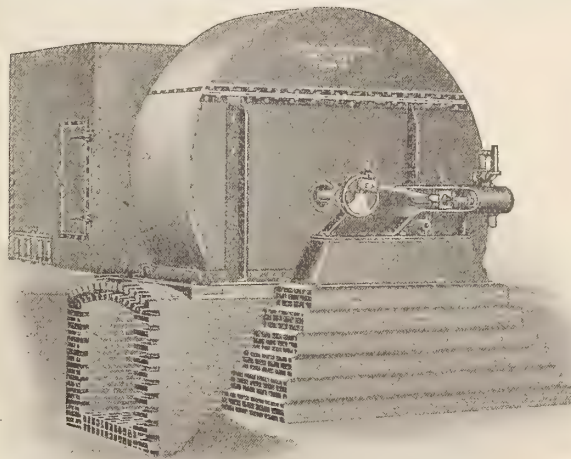
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SHELDON & SHELDON, GALT, ONT.

Hot Blast Heating
Systems

for

Schools, Colleges,
Public Buildings,
Warehouses, Factories,
Tanneries, Railway
Shops, Car Sheds and
Round Houses.



Mechanical Draft
Systems

for

Boiler Plants, Power
Houses and Steamships.

Drying Systems

of all kinds and for all
materials.

Pneumatic Conveyors and
Refuse Removers designed
and installed.

HEATING AND VENTILATING ENGINEERS

WRITE FOR OUR SPECIAL CATALOGUES

PLANS AND ESTIMATES FURNISHED ON REQUEST

HOISTING ENGINES and Machinery

Our Hoisting Engines are of improved patterns and designed to be as simple as possible, durable and efficient.

We are building a large range of hoisting engines of various sizes and kinds and always keep the standard sizes in stock for prompt shipment.

Let us quote on your requirements in this line.

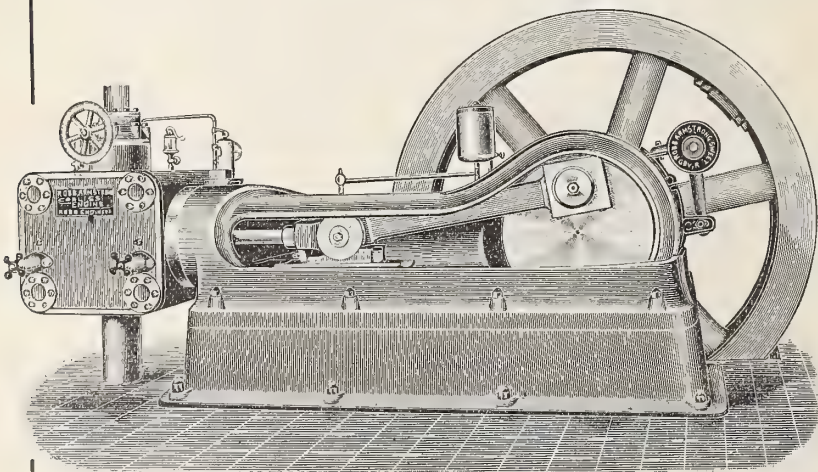
We are just issuing a new Catalogue of these engines and will be pleased to mail a copy to anyone interested

The Waterous Engine Works Co., Ltd.

Brantford

Canada.

A FINE STEAM PLANT.



"I will say without qualification that it is as fine a boiler and engine plant as I have ever had the pleasure of seeing for its size. The engine was working without heating and absolutely without any noise. I wish to congratulate you on your success in building this class of engine, and hope that we may have pleasure in dealing with you again."

The above refers to a 350 horse power Robb-Armstrong Corliss engine and two 175 horse power Robb-Mumford boilers installed by us.

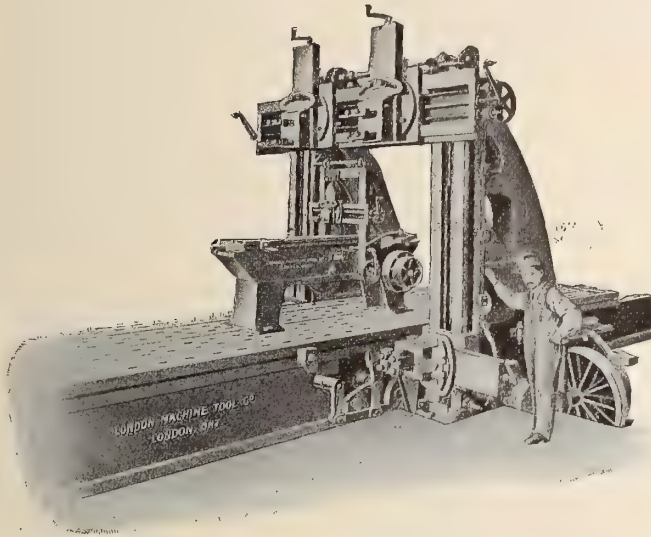
Robb Engineering Co., Ltd., Amherst, N.S.

AGENTS—Wm. McKay, 320 Ossington Avenue, TORONTO. Watson Jack & Company, Bell Telephone Building, MONTREAL.
J. F. Porter, 355 Carlton Street, WINNIPEG.

London Machine Tool Co.

London, Canada

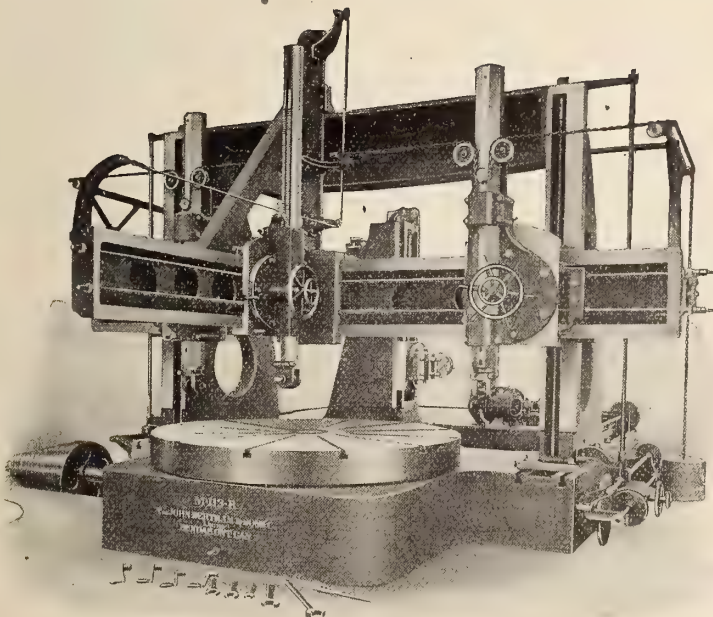
Manufacturers of High Grade Machine Tools



72 x 72 x 25 ft. Planer. Weight 120,000 lbs.

Lathes Planers
Horizontal Boring Mills
Vertical Boring Mills
Shapers
Upright Drills
Plain Radial Drills
Universal Radial Drills
Slotters Presses
Steam Hammers
Drop Hammers

BERTRAM 12-16 foot BORING and TURNING MILL.



With rear housing and front extension arm, specially designed for turning and boring large diameters. As shown in the illustration this machine admits 12 feet 4 inches between housings, 6 feet 10 inches under tool holders and 7 feet 4 inches under crossrail, has two turning tools on crossrail, one boring and turning tool on the extended arm and a fourth tool on the back housing. The rear housing is adjusted by power in and out, so that diameters from 16 feet down to 12 feet may be turned. The tool-slide has a vertical feed by power and quick hand adjustment. The housings are moved by power, an auxiliary motor being provided for this purpose and also for elevating the cross-rail.

Photos and Particulars of this or any of our Machine Tools will be sent on request.

The JOHN BERTRAM & SONS CO.,
DUNDAS - - - - - Ontario, Canada. **LIMITED**



A Successful Railway Roller Bearing

AS PROVEN BY THE FOLLOWING :

THE HENDERSON ROLLER BEARING MANUFACTURING CO., LIMITED,
785 King Street West, Toronto, Ont.

HAMILTON, CANADA, 27th August, 1904.

GENTLEMEN,—*Re Working of Bearings on Freight Car.* Your Roller Bearings have been in operation on our heaviest car since shipment of trucks to us some ten months ago, and are giving perfect satisfaction. We find on examination the condition of the Bearings is as good as when they were installed. We have placed them on our heavy freight car so as to give them the severest test possible on our system. The length of our freight car is 58ft., weighs about 15 tons, and carries from 15 to 18 tons of freight, running over 108 miles daily.

We find that the car coasts fully one-third farther than the other cars. We have had no hot boxes since installation, and have saved 90 per cent. of the amount of oil required by the ordinary journals, while no waste is required and no time lost replacing brasses and packing, besides avoiding the drip of oil which is so evident in the ordinary stuffbox.

Judging from results up to date the Bearings will not require renewing for years. We expect to have all our heavy cars equipped as soon as possible.

Yours truly, (Signed) HAMILTON, GRIMSBY & BEAMSVILLE ELECTRIC RY. Co.
GEO. E. WALKER, Manager.

THE GRAND VALLEY ELECTRIC R.R. have several cars already in use, and expect to equip throughout their whole system.

THE TORONTO RAILWAY Co. are now using them and are delighted with them.

In use in scores of factories in Canada from east to west. Also on Vehicles, etc.

As the present premises are overtaxed in filling orders, a site has been secured on King St., west of Subway, where a new factory will shortly be erected.

ALL BEARINGS GUARANTEED

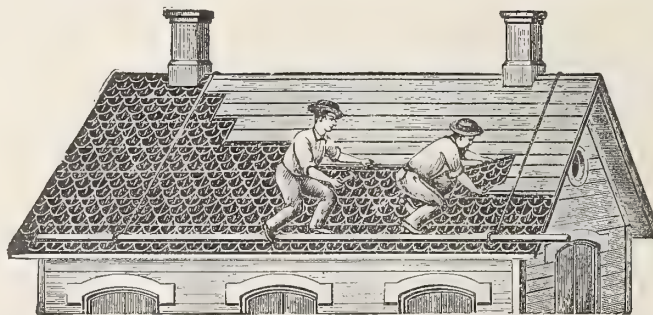
THE HENDERSON ROLLER BEARING MANUFACTURING COMPANY, Limited

Head Office: 403 TEMPLE BUILDING, TORONTO.

Factory: 785 KING ST. WEST.

PEDLAR'S STEEL SIDING AND SHINGLES

At \$2.00 and \$2.55 per 100 Square Feet.



Painted red on both sides. Most durable and economical covering for Roofing or Siding for Residences, Houses, Barns, Elevators, Stores, Churches, Poultry Houses, Cribs, etc.. Easier to lay and will last longer than any other covering. Cheaper than wood shingles or slate. No experience necessary. A hammer and snips are the only tools required. It is semi-hardened high grade steel. Brick or Stone Siding at \$2.00 per 100 Square Feet. Pedlar's Patent Steel Shingles at \$2.55 per 100 Square Feet. Also Corrugated Iron, Painted or Galvanized, in sheets 96 inches long. Beaded and Embossed Ceilings. V. Crimped Roofing. 2000 designs of Roofing, Siding and Ceilings in all grades. Thousands of buildings through the Dominion covered with our Sheet Metal Goods, making them

FIRE, WATER AND LIGHTNING PROOF.

Send in your order for as many squares (10 x 10 feet) as you require to cover your new or old building. The very best roofing for this climate. We can supply Eave Trough, all sizes, Corrugated or Plain Round, Conductor Pipes, Shoes, Elbows, Spikes, Tubes.

All goods shipped day after order is received. We are the largest concern of the kind under the British flag. Established 1861. Capital invested \$150,000.00.

THE PEDLAR PEOPLE, OSHAWA, ONTARIO, CANADA.

MONTREAL,
767 Craig St.

OTTAWA,
423 Sussex St.

TORONTO,
50 Yonge St.

CALGARY, ALTA.,
201 7th Ave. E.

VANCOUVER, B.C.,
615 Pender St.

QUEBEC,
7-11 Rue
Notre Dame.

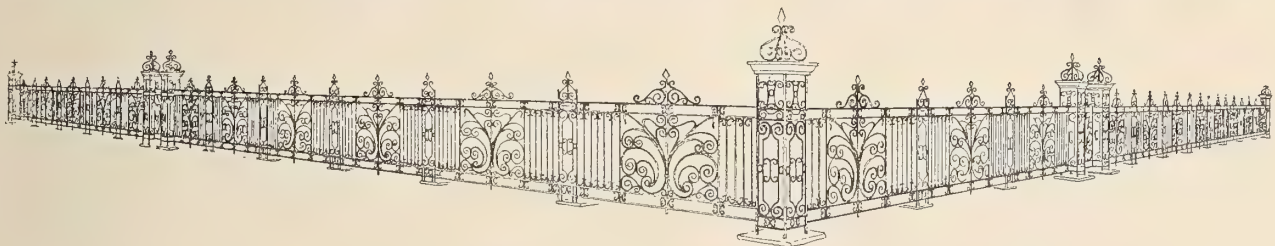
WRITE YOUR NEAREST OFFICE.

**SADLER &
HAWORTH**

"CROWN BRAND" LACE LEATHER
will be found perfect and satisfactory
in every particular.

**LEATHER
BELTING**

WROUGHT IRON FENCING



LIGHT STEEL CONSTRUCTION WORK, FIRE ESCAPES
WROUGHT IRON WORK, FACTORY WINDOW GUARDS
WIRE SCREENING, WIRE CLOTH
OFFICE AND ELEVATOR ENCLOSURES
ETC., ETC.

THE GEO. B. MEADOWS TORONTO WIRE & BRASS
WORK CO., Limited,
NEW ADDRESS : 67 WELLINGTON PLACE, TORONTO

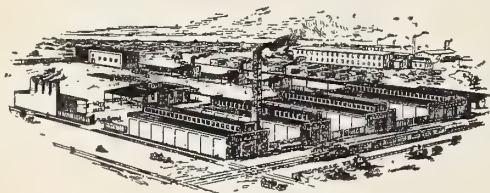
TO THE VARNISH BUYER

the most serious considerations are quality, reliability and uniformity, and these qualifications are of special importance to the dealer who is trying to build up a permanent varnish trade.

Berry Brothers' label or brand may be safely relied upon as ensuring the above conditions.

Our varnishes are the safest goods to handle and the surest and most reliable goods to use.

Write for 100 page Illustrated Catalogue. Every dealer should have a Copy for Reference.



BERRY BROTHERS, Limited

VARNISH MANUFACTURERS

WALKERVILLE - - - - - ONT.

Are you satisfied with the quality of your

Malleable Iron Castings?

If not try

McKINNON DASH & METAL WORKS CO.

ST. CATHARINES, - - - - - ONT.

OUR SPECIALTY:

Tinned Milk Can Handles and Kettle Ears
Tinned Conductor Hooks

And all kinds of Tinned Malleables.

MADE IN CANADA

THE STEEL RAIL MILL OF

The Algoma Steel Co., Limited, Sault Ste. Marie, Ont.

IS NOW IN OPERATION AND TURNING OUT

A.S.C.E.
STANDARD
SECTION

Steel Rails

OF
HIGHEST
QUALITY

Your Specification will have our best attention

OFFICES
Canada Life Building
MONTREAL

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DRUMMOND, McCALL & CO.

General Sales Agents

THE ALGOMA STEEL CO., Limited

Nova Scotia Steel & Coal Co.

LIMITED

HEAD OFFICE : NEW GLASGOW, NOVA SCOTIA

STEEL WORKS	=	TRENTON, N.S.
BLAST FURNACE	= =	FERRONA, N.S.
IRON MINES	= =	WABANA, NFLD.
COLLIERIES	= =	SYDNEY MINES, N.S.

"OLD SYDNEY COAL"

(Shipping Port, - North Sydney)

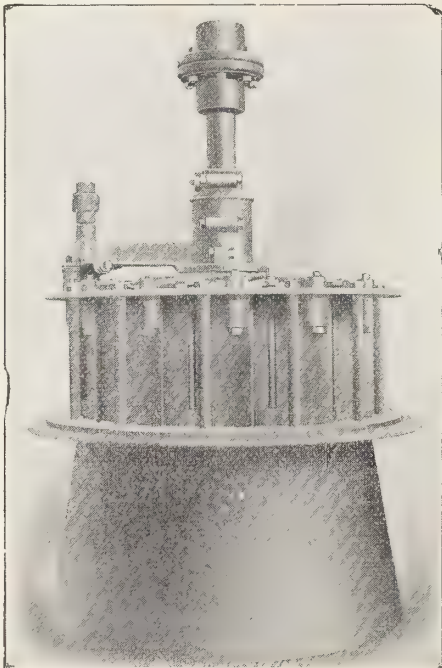
ADDRESS ALL CORRESPONDENCE TO HEAD OFFICE

THE SAMSON TURBINE

Our Samson water wheel is the result of many years' experience and study of turbine building, and it is to-day admittedly the standard for all water wheels.

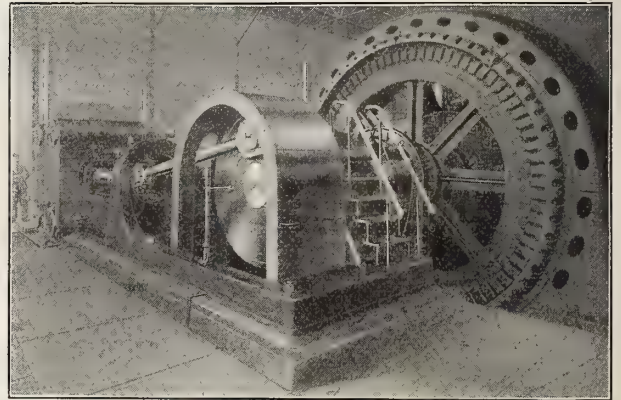
Several sizes of the Samson have been tested at Holyoke, with the result that the horse power developed has been in every case at least 4 per cent. better than our catalogue tables.

Further, the speed and efficiencies have never been approached by any other turbine running under the same conditions, and developing about the same horse power.



THE WM. HAMILTON MFG. CO.
LIMITED
PETERBOROUGH, ONT.

HEAVY DUTY ENGINES



We build either simple or compound for speeds up to 150 revolutions per minute. Particularly adapted for direct driven Electrical Work.

THE GOLDIE & McCULLOCH CO.,
GALT, ONTARIO, CANADA LIMITED

WE MAKE Wheelock Engines, Corliss Engines, Ideal High Speed Engines, Gas and Gasoline Engines, Boilers, Steam and Power Pumps, Water Wheels, Flour Mill Machinery, Oatmeal Mill Machinery, Gyrators, Emery Choppers, Wood Working Machinery, Shingle Machinery, Heading and Stave Machinery, Wood Rim Split Pulleys, Iron Pulleys, Shafting, Hangers, Friction Clutch Couplings, Friction Clutch Pulleys, Safes, Vaults, and Vault Doors.

Polson Iron Works

Limited
TORONTO, CANADA

Steel Shipbuilders, Engineers
and
Boilermakers

Hydraulic and Dipper Dredges,
Steel and Composite Steamers and
Yachts, Marine and Stationary
Engines and Boilers.

OFFICE AND WORKS
Esplanade Street East
TORONTO

Fire Protection.



HEAD (FULL SIZE CLOSED)

The
"Manufacturers"
Automatic
Fire
Sprinklers

*are approved by all
Insurance
Interests
and where
installed
lowest rates
obtain.*

*Full particulars
on application.*

The
Non-Corrosive
Sprinkler

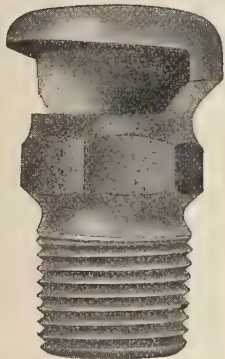
The
General Fire Equipment Co.,
Limited,
Toronto.

"We Safeguard your Interests"

- 1st** By our Expert Appraisements of your property. Which, under our system, are unequalled for showing incontestably the true value of your property any time. We guarantee our work in this line to be unexcelled.
- 2nd** By our "Expert Fire Inspections" of your premises. Which are made by our competent Inspectors free of all cost to you. Faulty or Inferior Construction and Insurance Requirements "pointed out"—and your insurance rates reduced.
- 3rd** By Supplying you with the best modern Approved Fire Protection Equipments, Materials and Supplies, for lowest cash prices. Automatic Sprinklers, Rotary Fire Pumps, Water Curtains, Fire Nozzles, Hose, Standard Doors and Windows, Wired Glass, Watchman's Clocks, Fire Extinguishers, etc., supplied—and lowest Insurance Rates secured to you. Write us.

THE CANADIAN APPRAISAL CO.,
LIMITED

Offices - No. 4 Hospital St., Montreal
No. 23 Scott St., Toronto



THE INSTALLATION
OF THIS
PROTECTION TO
YOUR PROPERTY
REDUCES YOUR
EXPOSURE RATE
40 TO 70%

"INTERNATIONAL"
WINDOW & CORNICE SPRINKLERS
FOR YOUR PROTECTION FROM
FIRE
IN SURROUNDING BUILDINGS

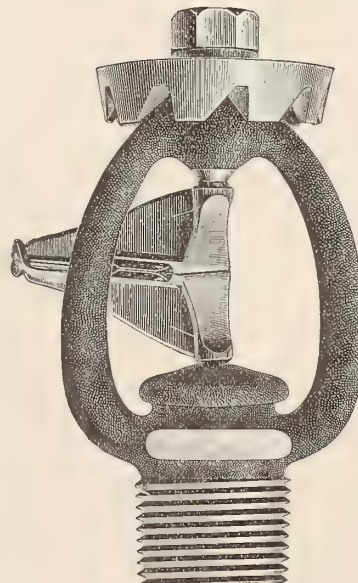
W. J. McGUIRE & Co.

TORONTO

MONTREAL

H. G. Vogel Co.

**30 St. George St.
Montreal, P. Q....**



**Esty Auto-
matic Fire
Sprinkler.**

It will
cut your
insurance
premium
in half and
protect you
against loss
by fire.

Write
for
particulars.

MICA COVERING

For Steam, Heat and Cold Water Pipes, Flues,
Furnaces, Boilers, Etc.

REFRIGERATING PLANTS

Proved by experts in Canada, Great Britain and the United States to be the highest nonconductor in the world.

In use by all the principal Railways in Canada, Great Britain and India, and by the British Admiralty and War Office.

Mica Weatherproof Cover is the most durable as well as being the highest nonconductor that is made.

MANUFACTURED SOLELY BY

MICA BOILER COVERING COMPANY, LIMITED
86 to 92 Ann Street, MONTREAL

Awards at { Paris Exposition, 1900; Pan-American Exposition,
Glasgow, 1901; Wolverhampton, 1902, etc., etc.

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MANUFACTURER

Office—17 Lemoine Street, MONTREAL

Factory—Canal Bank

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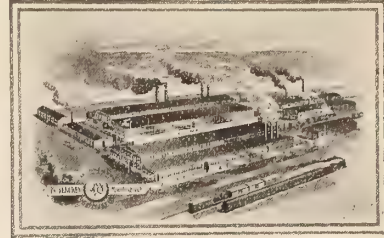
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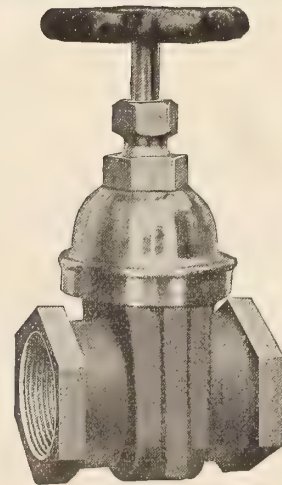
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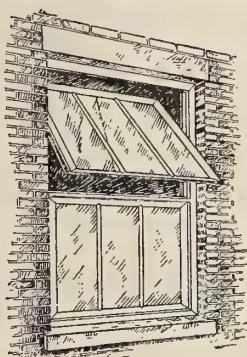
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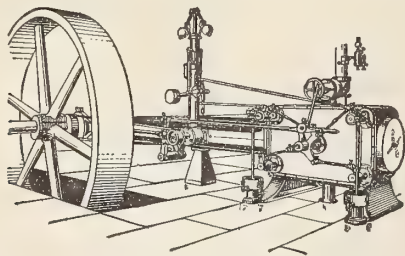
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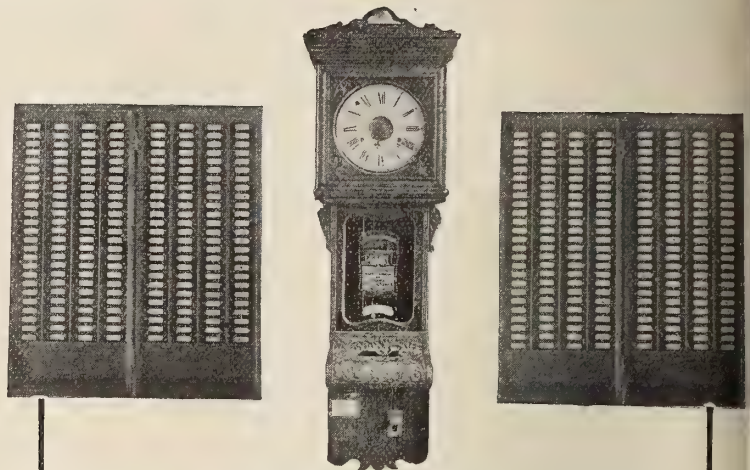
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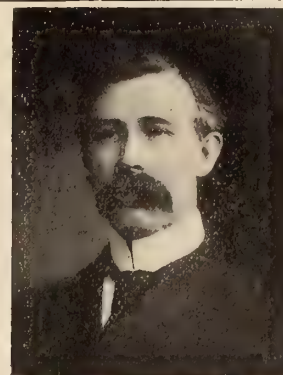
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No. 5.

INDUSTRIAL CANADA

Issued monthly as the the official publication of the Canadian Manufacturers' Association (Incorporated), and devoted to the advancement of the industrial and commercial prosperity of Canada.

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"TRADE ASSOCIATIONS" IN CANADA.

THE proceedings instituted in Toronto and Hamilton during the past month against certain "combines" and "trade associations," have naturally called forth much unfavorable comment from the press, and have aroused a feeling of uneasiness in the mind of the Canadian public.

The fact that agreements exist between individual members of any branch of trade is looked upon by the public with suspicion. A closer acquaintance, however, with these organizations may prove them to be not an unmixed evil.

Every branch of commercial and professional life to-day enjoys protection in some form. That it does means its own existence and the existence of society. The nation of to-day is a network of mutual understandings. The professions have their standards. The trades have theirs. The business world is honeycombed with associations of every description for the protection of as many interests. Our soundest systems and most substantial institutions are founded upon mutual protection. "Trade Associations" are the particular form in which mutual good faith is preserved between workmen, manufacturers, or wholesalers. They are not "combines" unless they have a common fund and a division of profits.

It has been stated and emphasized by political newspapers that such associations are among the "evils" following protection. This is not borne out by the facts, as we find them flourishing equally well in free trade countries. The two most powerful combines in the United States are the Standard Oil Co., and the Anthracite Coal Combination, yet neither of them has any protection from the tariff—hard coal and petroleum and its products being on the free list. This phase of the question requires no further discussion.

Trade associations are one of the modern features of business life. They have emerged naturally as a characteristic of the great period of centralization and consolidation through which we are passing. They have not been called into existence without reason. In most cases they result from excessive competition, which often degrades the quality of products, disorganizes the trade, puts a premium on dishonesty, destroys the smaller business houses, and throws many out of employment. To meet such conditions the "Trade Association" is an absolute necessity, and a blessing to the community. It is also a blessing to the community in that it facilitates the work of specialization, thus making for increased economy of production.

The use of such associations is beyond question. Like other good things, however, they may be abused, and if used for *extortion* rather than for *protection*, they are undoubtedly an evil.

No manufacturer, or dealer, or workman, has any right to take advantage of organization, to "unduly enhance" the price of his products or wares. If he does, he should be made to pay the penalty. On the other hand, all credit to the employer, who, in the stress of international competition, with many employees depending upon him, joins in an honest endeavor to secure stability in the market and protect all classes from inordinate speculation.

We should demand the most complete investigation, and punishment for any wrong-doing committed by bodies who "bleed the public." Let us not condemn, however, the principle which brings business men together in an effort to meet the requirements of any trade under exceptional conditions.

We are living in an age of progress. We are competing with the world. "The old order changeth, yielding place to new," and "lest one good custom should corrupt the world," we must meet conditions as they come, encouraging always the highest ideals for Canadian business men, and stamping out injustice and dishonesty.

THE PERPETUATION OF THE SALMON.

NOW that another season of plenty for the British Columbia canneries has come and gone, leaving behind its rich rewards in the shape of a \$6,000,000 pack, interest in the perpetuation of the salmon is beginning to revive. An industry which can show such results as this, and upon which some 25,000 people are directly dependent for their livelihood, is certainly worthy of cultivation. Yet it seems only a matter of time if the present slaughterous methods of capture are persisted in before it must suffer a serious relapse.

According to the generally accepted theory, based upon the recurrence of big runs every fourth year, the fry which are hatched in the spawning grounds and hatcheries this season will be seen no more until 1909, when, in obedience to one of the mysterious laws of nature, they will return to the waters which saw their birth, there to end their lives in perpetuating the species for another cycle of four years. Similarly next season's run will consist of the grown-up fry hatched from the spawn of fish that escaped the nets in the lean year of 1902. Judging from past experience, and accepting the four-year cycle theory as correct, it will be an extremely small one, so small, in fact, as to make it almost unprofitable for the canners to operate.

The question is, can these lean years be converted by any means into years of plenty? That will largely depend upon on the number of fish that are allowed to reach the spawning ground. There are, of course, other factors which will come into play after the spawn has been deposited and fertilized; but the first essential to a bountiful harvest is to see that a sufficient quantity of seed is sown.

To any one who has watched the operations of the thousands of fishermen engaged in this industry, with their countless nets, traps, and other equipment, it seems little short of miraculous that any fish at all should be able to escape them. And indeed it is doubtful if many of them would, were it not for the wise precautions of the Canadian Fisheries Department in enforcing a close season of thirty-six hours in every week, in suspending all salmon fishing from August 25th to September 15th, and in limiting the use of traps and small-mesh nets.

But the strictest precautions on the part of Canadian officials may avail nothing if similar precautions are not adopted by United States officials. To-day salmon fishing in the salt waters of Puget Sound is absolutely unrestricted save by the cost of the fisherman's license.

Up to the present time the Government of Washington has shown little disposition to co-operate with Canada in the preservation of the salmon. That it should have failed to do so seems difficult to understand, more particularly in view of the fact that the United States is entirely dependent upon Canada's courtesy for the maintenance of the industry. It is a well-known fact that when coming from their feeding grounds away to the north-west, the salmon first make their appearance in Canadian waters, off the south-west end of Vancouver Island, and for a long distance skirt along the shore within the three mile limit. If franchises were to be given at these points, including the unrestricted use of traps, the entire pack would be secured by Canada, as practically no fish would escape to the inland waters beyond. These practices, however, have always been forbidden, with the result that a large and profitable industry has been preserved to the fishermen of both nations.

Upon reaching the islands of Fuca Strait and Puget Sound, the run apparently divides, a small part of it continuing through Canadian waters, the rest circling about

among the islands of the Sound, only to join forces again near the mouth of the Fraser River, up which nearly all the spawning grounds are located. The fish, therefore, are first met with in Canadian waters, they spawn in Canadian waters and are hatched in Canadian hatcheries, all expense in perpetuating the industry falls upon the Canadian Government, and United States fishermen get the bulk of the profit.

It is thus apparent that a grievous injustice is being done the British Columbia fisherman, and prompt steps should be taken by Dominion officials to see that his rights are properly protected. Considering the fact that the United States industry exists on sufferance, Washington should be the more ready to co-operate along any reasonable lines which our Government might suggest. Yet when an Order-in-Council was passed at Ottawa providing for a closed season in 1906, and again in 1908, Washington's Legislature failed to respond. While the establishment of closed seasons by both nations would undoubtedly improve the situation, it is questionable if it would satisfy Canadian fishermen who are now laboring under serious disadvantages as compared with their United States competitors. It would seem that the question should at once be made the subject of international negotiations, with a view to suppressing the evils which at present threaten the industry.

THE QUEBEC TAX.

IN response to numerous protests received from representative bodies in the United Kingdom, the Quebec Government have at length announced their intention of modifying the commercial travellers' tax in such a way as to render it less objectionable. The modification which they are considering is understood to be a reduction of the amount of the tax, probably from \$300 to \$100.

While such action will doubtless prove acceptable in that it relieves us from the stigma of having the most oppressive commercial travellers' tax in vogue anywhere in the world, it can never satisfy those whose objections have been taken on the ground that the measure is a restraint upon trade, and therefore one which it should be *ultra vires* for the Legislature to enact. Abolition, not modification, is what the business men of this country desire, and even were the amount reduced from \$300 to \$3 it would still meet with the same persistent opposition.

All such taxes are simply clogs to the wheels of commerce. Like the dust and dirt which collect about any mechanism they require to be cleaned away. If not removed, if allowed to grow and gather unchecked, they will ultimately become a barrier to progress. The Quebec Government tell us that they are in need of money, that the tax must therefore stand. Ontario, they say, is not in such straitened circumstances, and does not require a tax of this kind. But if it can once be demonstrated in Quebec that the tax is a success as a revenue producer, it will not be long before agitations are started in all the other provinces for similar legislation. The obnoxious form which the movement has taken in British Columbia and Prince Edward Island is ample proof of this.

And not only the provinces, but every county in every province, and every municipality in every county, might with equal reason claim the right to tax commercial travellers entering its territory. Business men who have some regard for national rather than provincial development, may well ask, is there nothing in the constitution to prevent such legislation. Each municipality appears to be at liberty, if it chooses, to regard the commercial traveller in the same

light as a transient trader, and tax him accordingly. They are already doing this in Brandon and in Rossland, and other towns may be expected to follow suit. If carried to its logical conclusion, therefore, the tax would speedily eliminate the traveller as a feature in modern commercialism. In other words, it would kill the goose which Quebec is hoping will lay the golden egg.

And what of the mail order houses that markets its wares within the Province without exposing itself to the operation of such a tax? What of the long-distance-telephone-traveller who likewise transacts business upon which it is impossible for the provincial officials to levy a toll? It is obviously unfair, if these men are to escape the payment of the tax, to discriminate against one whose business demands that he employ travellers, and who, in so doing, directly benefits the community by the liberal expenditure of money.

As a means of supplementing the customs tariff, the measure is impracticable. It pays no regard either to the rate of duty chargeable against the goods sold, or to the volume of business transacted. In one case it may resolve itself into a heavy duty on goods which the Customs Department intended to be free; in another case, when duly apportioned among all purchasers, its effect may be infinitesimal on goods which pay a high rate of duty. But if it interferes with or supplements the customs tariff in any way, does it not carry the Province beyond its jurisdiction? Clearly, if the Act is constitutional, the sooner it is made unconstitutional the better.

But apart altogether from the constitutional aspect of the measure, it is extremely unfortunate that British travellers should have been included within the scope of its operation. Such an act of unfriendliness may do much towards thwarting the imperial preferential movement to which the Dominion has committed itself. Local interests should do everything in their power to forward, rather than retard, the closer commercial relationships which are aimed at, and it is to be hoped that Quebec may yet be persuaded to repeal this legislation.

CANADA AND THE BRITISH WEST INDIES.

THE admission of the British West India Islands into Canadian Confederation is apparently not viewed with universal favor in this country. 'Strong exception is taken to such a policy in certain quarters on the ground that Canada is not yet ready to take up the white man's burden. "The sugar we would get from them would turn to vinegar when we faced the colored, and half-colored, and quarter-colored problem," says the *Ottawa Free Press*, which is probably only another way of expressing the opinion that the disadvantages to Canada would more than offset all the advantages we would derive from such a union.

Undoubtedly the colored problem is a most serious one, one which is in itself distasteful and whose solution we would fain leave to other hands. Notwithstanding this fact, Canada has an imperial duty to perform which should not be lost sight of.

Under existing conditions, the British West Indies are slowly but surely drifting into annexation with the United States. Their geographical situation favors such a movement, and their trade connections are day by day strengthening it. The products of these islands are largely agricultural. The islands themselves are not adapted to the development of extensive manufacturing industries. For manufactured goods they must always be dependent upon external sources

A HAPPY THOUGHT!



THE GLOBE & CO.:—"Let's take down the bars, and Uncle Sam's Collies will take care of the sheep."

—The Evening Telegram, Toronto.

of supply. Their most natural market, both for buying and selling, is the big republic near whose shores they lie. The establishment of weekly and in some cases semi-weekly steamship services from New York, Boston, and Philadelphia, has been a powerful factor in diverting trade into United States channels. In the absence of any preferential arrangements, the United States will enjoy a perpetual advantage in the West Indian markets for her manufactured goods, by reason of her ability to make prompt and cheap deliveries. The recent increases of her trade in that quarter over the trade of other countries is quite marked. The United Kingdom still supplies the bulk of the clothing and hardware trade, but the United States is rapidly securing control of the remainder. Another influence which is tending to draw still more closely the bonds which unite the two countries together is the liberal investment of United States capital in West Indian colonization, railroad, and mining enterprises.

But dependent as the British West Indies are upon the United States for their manufactured goods, the United States is by no means proportionately dependent upon the British West Indies for her tropical supplies. Her own southern states are capable of yielding a large portion of these; the balance she can procure from Porto Rico, Hawaii,

and the Philippines. The products of all these islands, which come into direct competition with those of Trinidad and Jamaica, enter the United States free of duty, whereas the products of the latter are required to pay a toll. It is readily conceivable, therefore, if the United States were inclined to force matters, that by increasing the tariff on tropical productions she might soon bring the British West Indies to their knees. Add to all these the natural resentment which has arisen from the seeming policy of indifference pursued by the Colonial Office towards these possessions, as instanced among other things by its recent refusal to renew the West Indian Mail contract, and it is not surprising that the question of reciprocity with or annexation to the United States, or Canada, should have begun to take shape among the people of these colonies as the only practical solution to their difficulties.

The question for us to decide is whether we are to stand idly by with our arms folded while our "Sister of the Palms" drifts slowly out of the Empire. The troubles from which she seeks relief can be just as satisfactorily solved by annexation with Canada as by annexation with the United States—perhaps more so—and there is every reason to believe that were we to extend the offer it would prove acceptable. Surely the retention of such a valuable possession is an object worthy of some sacrifice, even should that sacrifice be without its compensating advantages in the way of personal gain.

WAGE COMPARISONS IN THE CENSUS.

THE Census Commissioner, in concluding his report on the manufactures of the Dominion (Fourth Census of Canada, 1901, Volume III.) says:—

"The average wage in all industries appears to indicate an advantage for the Canadian manufacturer, as its cost is less to him by \$148.64 per employee than the American manufacturer pays. But, of course, cheap labor is not always an advantage in the conduct of industries, and the question deserves more investigation. Why in all the groups is the average price of labor cheaper in Canada than in the United States—in two countries contiguous to each other, and peopled by the same races of men employed in the same industries? It may be due to a lower cost of living in the one country than in the other, or to less efficiency of labor, or to a relatively larger supply of workmen, or to a narrower margin of profit, on a more circumscribed production—although as a matter of fact the ratio of wages to the value of products is 2.58 less in the United States than in Canada. But in the home of great industries, with capital and products of multiplied millions, the advantage of conditions is almost sure to prevail. This is indicated by the ratio of capital to value of product, which is 75.50 in the United States, and 92.90 in Canada; as well as by the average value of product per employee, which is \$2,279 in the United States, and \$1,398 in Canada. Generally, and under similar conditions, the volume of business will determine the ultimate advantage."

Elsewhere in his report the statement is made that of the whole number of 14,650 establishments operating in Canada in the census year only 6,328 were employed full time, 1,277 three-quarters time or over, 4,778 from half time to three-quarters time, and 1,506 from quarter to half-time.

Does it not seem probable that in this unfortunate record of idle factories is to be found the real explanation of the disparity between the average wage in Canada and the average wage in the United States? With 33 per cent. of our factories working little more than half-time, and

10 per cent. of them working little more than quarter time, it is not surprising that the average yearly wage earned by workmen in Canadian establishments should be lower than in a country where tariff conditions ensure steady operation the year round.

Similarly, had Canadian workshops been operated more continuously, the value of their products would have been increased, and in consequence the ratio of capital (which is fixed) to the value of products would have been considerably lower. In like manner, the average value of product per employee would have been more nearly equal to what it is shown to have been in the United States. It would seem, therefore, that in this same condition of idle factories lies the explanation of the apparent "advantage of conditions" enjoyed by our neighbors to the South.

We refer to these points simply for the purpose of illustrating how futile it sometimes is to attempt to use census figures of wages in making comparisons. That they are misleading is clearly recognized by the Chief Statistician for Manufactures for the United States, who thus summarizes the situation, (Twelfth Census, Vol. VII., p. cxii.):

"The statistics obtained by the Census Office on the general manufacturing schedule indicate the share which labor received as a whole, without regard to its character, degree of skill involved, or continuity of employment. . . . Under modern conditions of manufacture, operatives are grouped into a great number of classes, and are paid according to the work done and the degree of skill required. Thus many different grades of wages are paid, at both time and piece rates, varying from the compensation of the skilled and responsible foreman or overseer to that of the common laborer or child. An average obtained by dividing the number of wage-earners into the total amount of wages paid in any establishment thus becomes misleading. The argument that such an average is serviceable for purposes of comparison from one period to another must presuppose that the proportion of skilled and unskilled labor at the two periods for which the average is returned remains substantially the same."

If it is misleading to speak of the average wage paid in a single establishment, how much more so is it to speak of the average wage paid all over the country, and then to compare that wage with the average wage paid in another country, when the situation is still further complicated by great disparities in the matter of continuity of employment.

This criticism, however, is not intended to reflect in any way upon the value of the statistical data contained in the volume. We note with pleasure the marked improvements which have been made in systematizing the information obtained regarding manufactures, so as to present it in the most useful and intelligible form. Many of these tables and classifications are new to the Canadian census, and will be much appreciated by manufacturers in whose interest they have been completed.

NOTICE.

Advertisers are again reminded that commencing with January number, *Industrial Canada* will make its appearance promptly on the first of each month. Change of Copy, therefore, should be in our hands not later than the 18th of the month before. Kindly bear this fact in mind and be governed accordingly.

EXECUTIVE COUNCIL

NOVEMBER MEETING.

Active Membership Campaign to be Inaugurated—Dinners for Berlin and Sherbrooke—A Conference with the Railways on Mixed Carloads—Lord Strathcona Accepts Honorary Membership—Winnipeg Confirmed as Place for 1906 Convention.

THE regular monthly meeting of the Executive Council of the Canadian Manufacturers' Association was held in the Association offices, Board of Trade Building, Toronto, on Thursday, November 16, 1905, at 2.15 p.m.

The President, Mr. C. C. Ballantyne, was in the chair, and the following other members were present: Messrs. Geo. Anderson, C. A. Birge, Geo. Booth, P. H. Burton, R. J. Copeland, Hon. E. J. Davis, John Dick, L. V. Dusseau, J. F. Ellis, Thos. Findley, John Firstbrook, J. D. Flavell, Geo. D. Forbes, W. K. George, J. M. Gill, Geo. Gillies, W. P. Gundy, L. Harris, S. R. Hart, E. G. Henderson, H. L. Hewson, J. Hewton, R. Hobson, A. E. Kemp, R. McLaughlin, J. S. McKinnon, W. K. McNaught, Jas. Maxwell, J. P. Murray, W. C. Phillips, E. W. Rathbun, A. T. Reid, Thos. Roden, A. S. Rogers, T. A. Russell, J. T. Sheridan, J. M. Sinclair, F. J. Smale, H. Stroud, Geo. Sweet, A. W. Thomas, W. B. Tindall, R. L. Torrance, Jas. H. Woods.

Communications.

Communications were received as follows:

1. From members of the Executive Council unable to be present: Messrs. H. Cockshutt, J. J. McGill, J. M. Taylor, R. B. Hamilton, S. W. Ewing, W. R. Landon, Arthur W. White, John Ransford.

2. From Lord Strathcona, accepting the appointment as the first honorary member of the Association. This letter was received with much enthusiasm, and at the suggestion of the President it was unanimously agreed that it should be published in the next issue of INDUSTRIAL CANADA.

3. From the Executive of the Montreal Branch, asking that the Executive Council should request the Railway Commissioners to postpone a decision upon the mixed car load question until the railway companies should be given a further opportunity to meet the shippers in this matter. This letter was by unanimous consent held over until the presentation of the report of the Railway and Transportation Committee.

The reports of officers and committees were then received as follows, and upon motion with amendments reported were unanimously adopted.

Secretary.

The Secretary reported that while the regular work of the Association in its various departments had been taken care of during the month, his own attention had been given largely to the tariff investigations being made among the members, with a view to harmonizing the interests which should appear before the Tariff Commission.

Treasurer.

The Treasurer, Mr. Geo. Booth, submitted the monthly statement showing the receipts and expenditures up till November 1st.

Finance Committee.

The report of the Finance Committee was presented by Mr. W. B. Tindall. In addition to recommending the payment of the accounts covering the regular monthly ex-Government regarding the provisions and operation of the

penditure it announced the appointment of Mr. W. B. Tindall as Vice-Chairman of the Committee, and requested the Executive Council to authorize him to countersign cheques on behalf of the President. It also recommended that Mr. W. K. George and Mr. Lloyd Harris be appointed a special committee to report upon the question of new offices for the Association.

Reception and Membership.

The report of the Reception and Membership Committee was presented by the Chairman, Mr. L. V. Dusseau.

It recommended for acceptance sixteen applications for membership, the names of which appear in another column.

It reported a special meeting of the new committee, at which plans were laid for a membership campaign. This campaign as recommended included (a) a follow-up system among the non-members, conducted from the head office; (b) special efforts from leading members of the Association in important manufacturing centres; and (c) work through the various Branch offices in their local fields.

It also recommended that monthly dinners be held under the auspices of the Association next month in Berlin, Ont., and the following month in Sherbrooke, Que. Windsor and Peterboro' were suggested for further functions of this kind.

The committee also recommended that the Executive Council should now make a definite announcement with regard to the selection of Winnipeg for the next annual meeting. It was also recommended that the Secretary be requested to communicate with the Manitoba Branch regarding the most suitable date for the Convention.

A circular designed to secure a statistical census of the number of hands employed by the members of the Association was approved.

The report having been presented, it was moved by Mr. E. G. Henderson, seconded by Mr. W. K. George, that the Executive Council announce their decision to accept the invitation extended from Winnipeg to hold the next annual meeting at that point. This motion was unanimously carried.

Railway and Transportation Committee.

The report of the Railway and Transportation Committee was presented by the chairman and read by the manager of the Department, Mr. Marlow. This report is outlined in another column.

Dealing with the subject of mixed car loads, the letters from the Montreal Executive were submitted, and after a thorough discussion it was moved by Mr. Henderson, seconded by Mr. Birge, that the request of the Montreal Branch be acceded to. This was carried by the Executive after a number of members had voiced the opinions of those present in complimenting the Railway and Transportation Committee upon the successful manner in which the question had been handled.

Parliamentary Committee.

The report of the Parliamentary Committee was presented by the Vice-Chairman, Mr. A. S. Rogers. It announced the continued co-operation of the committee with the Canadian Branch of the Society of Chemical Industry in an effort to secure more satisfactory administration of the Dominion pure food laws. It also approved of a special

enquiry among the Ontario members of the Association with a view to making recommendations to the Ontario new Assessment Act in that Province. It stated further that in the efforts being made by the Association to secure the removal of Provincial taxes on extra-provincial corporations arrangements were being made to bring the subject before the next conference of the provincial Premiers.

Commercial Intelligence Committee.

The report of the Commercial Intelligence Committee was read by the Secretary. It announced the decision reached by the Dominion Government to accept the official invitation to participate in the New Zealand National Exhibition, in the success of which the Association was deeply interested. It was recommended that steps should be taken to have announcements made to the members in the near future on this important matter. The report also touched upon the work of the Canadian commercial agents, and upon the extension of the South African preference to Canadian goods.

Fire Insurance Committee.

The report of the Fire Insurance Committee was presented by the Chairman, Mr. P. H. Burton, and after some discussion was referred back to the committee for further consideration.

Mr. J. P. Murray having resigned from the committee, Mr. W. T. Kernahan was elected in his place on the General and Advisory Committees. Mr. W. B. Tindall was elected Deputy Chairman in the place of Mr. Murray.

Industrial Canada Committee.

Mr. T. A. Russell, the Chairman of this committee, presented his report showing the progress made by INDUSTRIAL CANADA during the past two months. The contract for printing and supplying the paper for the incoming year was awarded to The Monetary Times Printing Co., of Canada, Limited. It was also recommended that the card advertisements should be continued as a feature of the paper, and that the committee should adhere to an absolute uniformity of type arrangement in these columns.

Branches.

The reports of the Montreal, Toronto and Manitoba Branches were then presented. All of these follow this report.

New Business.

Mr. J. P. Murray suggested that the more important reports presented to the Executive Council should be printed previously and forwarded to the members in order that time and discussion might be saved. The President stated that this suggestion would receive careful consideration.

Mr. P. H. Burton announced that the regular meetings of the Insurance Committee would be held on the morning of the Executive Council meeting-day, and that members of the Executive would be cordially welcomed.

Mr. W. K. McNaught moved and Mr. Geo. Booth seconded a resolution expressing condolence with the wife and family of the late R. W. Elliot, of Toronto, a former President of the Association. This was unanimously carried amid expression of deep regret at the death of one who had been for some years so prominently connected with the Association.

The meeting then adjourned.

MONTREAL BRANCH.

Two meetings of the Montreal Executive Committee were held during the past month. The first on October 24th was called to discuss the stand taken by the Association in regard to the shipment of goods in mixed carloads to points west of Port Arthur. At this meeting a resolution was passed

requesting the Executive Council to have the Railway Commission withhold judgment until the Railway Companies be given an opportunity to effect a compromise. Mr. J. R. Marlow addressed a meeting of Montreal members on October 21st, in regard to the mixed carload question.

The regular monthly meeting of the Montreal Executive was held on November 9th, with the Vice-Chairman, Mr. D. Lorne McGibbon presiding. A report was presented from the second delegation which had interviewed Hon. Lomer Gouin and other members of the Provincial Cabinet, regarding the Quebec Commercial Travellers' Tax. While no definite assurance was given that the tax would be repealed, the Premier had promised to give the matter consideration.

Two delegates were appointed to attend a meeting of the Commercial Organizations in Montreal, called to consider what action should be taken toward securing the repeal of the Quebec license on Extra-Provincial Corporations and Joint Stock Companies. A second resolution endorsing the first was passed in connection with the mixed carload question.

Trafalgar Day, October 21st, was the occasion of a large public demonstration in Montreal. Representatives of the Canadian Manufacturers' Association joined in the celebration, and a handsome wreath bearing the Association's name was placed upon the Nelson monument.

Seven other meetings were held in the Association offices during the month, the majority of them being for the preparation of cases to be submitted to the Tariff Commission.

TORONTO BRANCH.

The Executive Committee of the Toronto Branch held its regular monthly meeting on 9th November. There were present Messrs. W. B. Tindall (Chairman), Jas. P. Murray, Alfred Jephcott, A. S. Rogers, C. N. Candee, H. W. Beatty, Frank A. Rolph, S. R. Hart, John W. Cowan, Ed. J. Freyseng and R. J. Younge.

Different matters dealt with were as follows:

The principal of the Toronto Technical School addressed the committee on the present conditions of Technical Education in the city, and asked for the appointment of a special committee to advise him regarding any forward steps that should be taken to educate the young people of Toronto to secure positions in the commercial world. A committee was appointed for this purpose as follows: Messrs. Alfred Burton, Thos. Findlay, Gerhard Heintzman, W. A. Johnson, Chas. Morrison, J. P. Murray, Frank A. Rolph, Harold Van der Linde, S. Morley Wickett.

The Merchants' and Manufacturers' Association of Pittsburgh, having contemplated a tour at an early date, notified the Branch that if an invitation were extended they would probably visit Toronto. On our request the City Council extended this invitation, and approved of the preparation of statistical information regarding the growth and development of the city, which will be published for distribution to the visitors. It has not been finally decided whether or not the Pittsburgh manufacturers will come to Toronto.

The Toronto Branch Dinners Committee reported that it had been recommended that five dinners should be held during the winter on the third Tuesday of each of the months from November to March (inclusive), and that the subject for the first dinner should be "Fire Insurance in Perspective," and to be introduced by Mr. E. P. Heaton.

The Membership Committee reported that they had gone over list of non-members in the city and had divided

them up amongst members of the Executive, who would be asked to exert a personal influence to get them to join the Association.

Three applications for membership in the Association were approved of.

The enquiry circular, sent out to ascertain how the new Assessment Act was affecting the manufacturers, was not well replied to. The returns, however, showed that the assessment in 1904, amounting to \$2,458,000, had been increased by the 1905 assessment to \$2,678,000. It was decided that a notice should be sent out asking manufacturers who had not already reported, to do so at an early date. On this same notice attention was called to an invitation extended to the Toronto Branch by the Canadian Club to be present at an address on "Profit Sharing," delivered by Mr. T. C. Taylor, M.P., England, and to an invitation extended by the Society of Chemical Industry to be present at a meeting at which the Metric System would be discussed.

MANITOBA BRANCH.

The first regular meeting of the Manitoba Branch was held on the evening of November 6th, when the following resolution was unanimously adopted:

"The Manitoba Branch learns with much pleasure that the invitation extended by it to the Association to hold the next annual meeting in Winnipeg has been practically accepted, and the Branch pledges itself to do everything possible to make such meeting a success."

Following the decision of the Executive Council at its October meeting, the election of Mr. E. L. Drewry to the Chairmanship of the Branch, and of Mr. L. C. McIntyre to the Provincial Vice-Presidency was confirmed.

An interesting report of the proceedings of the Quebec Convention was presented by the Chairman, Mr. Drewry, and was the means of arousing considerable enthusiasm.

Upon motion of Mr. W. J. Bulman, it was decided that the Branch should hold a banquet in the near future, and a committee was appointed to superintend arrangements for the same.

A progress report was presented by the Committee on the Manufacturers' Business Taxes for the city of Winnipeg, who hoped soon to be able to advertise the city as a cheap place for manufacturing as regards taxation.

The Power Committee also reported to the effect that the efforts being made by the City Council in the direction of obtaining cheaper power were apparently meeting with some success. In this connection it was decided to petition the Dominion Government not to allow water powers on the Winnipeg River to be absorbed by private corporations until after the city of Winnipeg has been consulted in the matter.

A committee was formed to confer with similar committees and organizations in the city to devise if possible some improved form of municipal government. The meeting took place in the Council Chamber of the City Hall on November 8th, and as a result of the action at this meeting it is expected that a Board of Control will be established with powers similar to those vested in the Board of Control, Toronto.

RAILWAY AND TRANSPORTATION COMMITTEE.

The regular monthly meeting of the committee was held on November 8th.

Mixed Carloads.

A communication was read from the Secretary of the Montreal Branch enclosing a resolution adopted by the

Executive Committee of that branch on the 24th October, to the effect that the Executive Council of the Association be asked to communicate with the Railway Commission requesting that judgment be withheld for the present.

A communication from Mr. W. R. MacInnes, Freight Traffic Manager of the Canadian Pacific Railway, suggesting that the mixed carload question be the subject of discussion between the Advisory Committee of the Canadian Freight Association and representatives of this Association, and that, in the meantime, the Railway Commission be requested to permit the matter to remain in abeyance, was also read.

After a general discussion, in which all the members present, as well as Messrs. D. L. McGibbon and Wm. McMaster, of Montreal, took part, the committee decided to report to the Executive Council that it could not see its way clear to changing the position already taken respecting this important matter.

Car Shortage.

A communication was read from Mr. J. D. Flavelle, of the Flavelle Milling Co., Lindsay, reporting difficulty experienced in securing cars for the movement of grain from lakeport elevators to his mill, which difficulty was also shared by other millers, some of whom had had to close their mills, awaiting the arrival of wheat. A communication from Messrs. Taylor-Forbes Co., Guelph, on the same subject was also placed before the Committee. The Manager of Transportation Department explained the difficulties experienced by the millers and others, and also reported that the Board of Railway Commissioners had issued orders directing the traffic officer of the Board to make an enquiry into the whole subject of car shortage, and to report as soon as possible as to whether the railway companies had practised discrimination in the distribution, allotment, or use of their locomotives or freight cars in favor of any particular locality, classes of traffic or industries, and also to report as to the sufficiency or otherwise of the supply of locomotives, cars, rolling stock, and other appliances furnished by the railways for the carriage of traffic, and as to what measures should be taken to prevent the continuance or recurrence of such shortage as might be found to exist.

After hearing the report, it was decided by the Committee that, as the effects of car shortage were felt by all manufacturers and other shipping interests throughout the country, the Manager of Transportation Department should have further information from various interests before taking a definite stand before the Board of Railway Commissioners as to the allotment of the available supply of freight cars.

Aids to St. Lawrence Navigation.

A communication was read from the President, Mr. Ballantyne, requesting the Committee to give consideration to the subject of the work being prosecuted by the Dominion Department of Marine and Fisheries towards re-lighting and buoying the St. Lawrence route and the Atlantic seaboard, with the object of lessening the risks of navigation, decreasing the number of losses, and thereby directly affecting the rate of insurance to be paid by Canadian manufactured products exported to other countries. It is the opinion of the Committee that in the interests of Canada the improvement in the aids to navigation on the St. Lawrence should be carried on and completed as rapidly as possible, in order that the lowest rates of insurance may be obtained on products entering and leaving the Canadian ports, and it was decided to recommend to the Executive Council that a resolution be forwarded to the Dominion Government expressing appreciation of the efforts made by

the Government and urging that the improvements be carried to their logical conclusion with all possible speed.

Proposed Supplements to Classification.

Communications from the Chairman of the Advisory Committee, Canadian Freight Association, have been received intimating that the railways propose to stand by their applications for increase in the classification of forgings, less than carloads, the minimum weight of machinery in carloads, and rating for mixed carloads of furniture at owners' risk. In view of the protests of the Association, it is expected the Board of Railway Commissioners will call for a discussion of the points at issue in order to decide upon the application.

Rates on Vehicles Less than Carloads.

The Manager of Transportation Department reported that the modification in rating on vehicles, less than carloads, applied for on behalf of the carriage makers, had been agreed to by the railways. The changes are now embodied in a supplement to the classification, which has been forwarded to the Board of Railway Commissioners for approval.

Rates on Woolen Goods.

The Manager of the Department reported that the application by the Department on behalf of the interested shippers of woolen goods for the benefit of westbound rates on their eastbound shipments has been refused by the Canadian Freight Association.

NEW MEMBERS.

Passed by the Executive Council, November, 1905.

Chatham, Ont.

CHATHAM BENT GOODS, CO., LIMITED.—Bent Goods.

Doncaster, Ont.

THE D. B. MARTIN CO.—Abattoir Products.

Galt, Ont.

THE POWER & GAS MACHINE CO., LIMITED.—Cone Gas Producers, Gas Engines.

Hamilton, Ont.

INTERNATIONAL HARVESTER CO. OF CANADA, LIMITED.—
(W. R. Dunn, 6th member.)

Montreal, Que.

CANADA SAW CO., LIMITED.—Saws.

Niagara Falls, Ont.

ONEIDA COMMUNITY, LIMITED.—Traps, Snaps and Chains.

Quebec, Que.

GIGNAC, BELAND & CIE.—Doors, Sashes, Bar Stands, Etc.

LA CIE BRASSERIE DE BEAUPORT.—Lager Beer and Porter.

A. PICARD & FILS.—Heating Apparatus.

Sault Ste. Marie, Ont.

ALGOMA COMMERCIAL CO., LIMITED.—Veneer.

Thorold, Ont.

THE MONTROSE PAPER CO., LIMITED.—Book, Writing and Bond Paper.

Toronto, Ont.

CONDUITS CO., LIMITED.—Conduit Tubing and Fittings, Pipe Bending.

THE HURLBUT CO., LIMITED.—Infants' Soft Shoe Soles.

THE PARK BLACKWELL CO., LIMITED.—Pork Packers, Canned Goods.

TORONTO CASKET CO., LIMITED.—Caskets.

Whitby, Ont.

MARTIN MFG. CO.—Saddlery, Hardware.

STRATHCONA'S LETTER.

The following is the text of Lord Strathcona's letter, referred to in the minutes of the Executive Council:

28 Grosvenor Square, W.

London, 27 October, 1905.

DEAR MR. YOUNGE:

Your letter of the 28th September I beg to acknowledge.

In it you advise me that at the 34th Annual Meeting of the Canadian Manufacturers' Association, held in the City of Quebec, in September last, I was unanimously elected as the first honorary member of the Association.

For this, which I regard as a signal compliment and high honour, I beg of you to convey to the President and members of the Association my sincere thanks.

Will you also be good enough to say to the President and members how greatly I appreciate their kind expression of satisfaction with such action as I was able to take in connection with the delegation during their stay in this country, with the assurance that it afforded me the very greatest pleasure to be of use to them so far as was in my power.

Believe me to be,

Very truly yours,
(Signed) STRATHCONA.

R. J. Younge, Esq.

Sec'y Canadian M'frs. Association, Toronto.

JAPAN'S PROGRESS.

According to statistics recently to hand, Japan's foreign trade for the first half of 1905 reached the unprecedentedly high figure of 429,000,000 yen, an increase of 109,000,000 yen over the corresponding period of 1904.

The biggest increase was made with the United States, The United Kingdom follows with 31,000,000, and British India comes next with 26,000,000.

So far as exporters on this continent are concerned, there are splendid opportunities for increased trade in cotton spinning and weaving machinery, driving mechanism of all kinds, canning factory supplies and horses. Hitherto Japan's cotton factories have been built exclusively upon English models, and have been equipped with English machinery, and even with English power plants. There is now noticeable a decided tendency towards expansion, not so much in the starting up of new plants as in the enlarging of old ones, and Special Agent Crist, of the United States Consular Service, strongly urges manufacturers of that country to send out expert men to demonstrate the economy, efficiency and simplicity of American-made machines.

The impetus given the canning industry by the recent war with Russia was tremendous, and while the demand is now falling off to some extent, and a few of the smaller establishments are beginning to close down in consequence, the trade has been found too profitable a one to be dropped without making a determined effort to retain it. Sample shipments of canned salmon, it is stated, have been made to China, Corea, Australia, and even to the United States, and from reports received are said to have met with a favorable reception. Government inspectors will endeavor to maintain a standard equal to anything of foreign production. At present nearly one hundred factories are in a position to export canned fish, and, as the supply from nearby waters is varied and practically inexhaustible, a great forward movement may be looked for.

The native horses of Japan are small and of an inferior standard, quite unequal to the demands that are made upon them. The Government is now interesting itself in the improvement of their quality, and are importing freely.

PROFIT-SHARING AT BATLEY

A Business-Like Scheme and How it Works

AMONG the many problems which have of late years been engaging the attention of business men, that of profit-sharing is one of the most interesting, in that it seems to afford a solution to perplexing labor difficulties. An able address upon this subject was recently delivered before the Canadian Club, Toronto, by Mr. T. C. Taylor, M.P., of Batley, Yorkshire. Mr. Taylor has made a careful study of the question and has put his theories to a practical test in his own works. The result of his experiments, coupled with an expression of his opinion on different phases of the problem, as outlined in the following article from the *Yorkshire Daily Observer*, should, therefore, be of particular interest.

Much is heard from time to time of profit-sharing among workpeople in connection with industrial undertakings; but there are varieties of profit-sharers, just as there are varieties of most things. So that, in judging of the merits of profit-sharing as a practical principle in industrial affairs, it is necessary to discriminate not merely between the idealistic dreams and projects of a Ruskinized theorist on the one hand, and the alluring wiles of the clever but selfish money-maker on the other, but also to recognize that there is considerable variation even in profit-sharing concerns that verge on neither of these extremes. In actual fact probably no two profit-sharing ventures are exactly alike in the broader details; certainly not in the minor ones. Investigation would show that they differ as much as, in ordinary business life, one firm differs from another in its methods. Results differ, too; and a failure here or a success there does not in itself constitute a condemnation or a vindication of the principle.

Success in profit-sharing depends on many things—especially on business capacity and foresight, coupled with practical generosity and patient sympathy on the part of those directing the business which produces the profits that are to be shared. For profit-sharing is not charity pure and simple; and the mere philanthropist, desirous of distributing for the benefit of his fellows his accumulating hundreds, or thousands, or millions, can find better openings for benevolence than in starting profit-sharing concerns. Profit-sharing is for business men, and particularly for those whom Ruskin has aptly termed “captains of industry”—men who love and revel in business as an outlet for their energies, who appreciate business success and enjoy the making of money as much as the keenest bargain driver and speculator on the market; but who wish to share the pleasure of making as well as of spending money with even the humblest of those associated with them in business; and who, while by no means despising or depreciating the advantages of a good bank balance, count their happiness not in proportion to the accumulation of hoarded wealth, but rather in proportion to the zest and pleasure with which they can themselves enter, and inspire those about them to enter, into their daily round of business, industry and labor.

This doubtless sounds a little rhapsodical; but it is true. And it is also true that there is a good deal more of this spirit abroad than many people imagine. This is evidenced by the experience of Messrs. J., T. and J. Taylor, Limited, the profit-sharing firm at Batley, about whom a great deal has been written and said of late. They have, within the past few weeks only, been the recipients of numerous enquiries about their methods from all parts of the United

Kingdom, and even from some of our colonies on the other side of the globe. Under the circumstances, a brief statement of his firm's profit-sharing experiences will possibly be both interesting and instructive, especially as the scheme now in operation at the firm's various establishments is, as far as it has gone, a proved success.

The Famous Batley Scheme.

It began in this way. The Taylor family have been woolen manufacturers for four generations. This particular firm at Batley was founded in the year 1845 by John, Thomas, and Joshua Taylor. Mr. Theodore C. Taylor, the present Liberal member for the Radcliffe-cum-Farnworth Division of Lancashire, who has been the moving spirit in the profit-sharing developments of the firm, is the son of Mr. Joshua Taylor, and up to the year 1892 he was a partner in the family business. Then he paid out the other partners and took the business entirely into his own hands, with the express purpose of working it on a profit-sharing basis. This was not the outcome of any enthusiastic impulse of the moment, because for years he had been a student of social and industrial questions and had closely interested himself in the subject of the relationship between employer and employee.

From 1892 to 1896, Mr. Taylor made a beginning with his experiment by taking into the business his chief assistants and the heads of the various departments, thus gradually paving the way for the wider scheme of profit-sharing which he had in view. Following up this first step, the clerks were next allocated a share of the profits of the concern in the shape of shares; and then, in the year 1896, at the annual gathering of the workpeople which Mr. Taylor had established, came the first public announcement that the business was to be transformed into a private limited liability company with the object of facilitating a scheme for extending the profit-sharing principle to the whole of the workpeople. The real intention from the first has been to get everybody who has been a whole year with the firm interested in the concern by giving each one a share in it. To ensure this the allocation of profits is made in this way. After the annual stock-taking, any balance of profit that may remain, after a due allowance for depreciation, etc., and the payment of 4½ per cent. interest on capital, is apportioned between capital and labor according to their respective amounts.

The clearest way of explaining this division of profits is to give an illustration. Thus, if the capital of a firm adopting this method were £100,000, and the wages paid during the year amounted to £50,000, and if the divisible surplus of profit (after allowance for depreciation and the payment of 4½ per cent. interest on capital) were £6,000, capital would be allocated £4,000, or an additional 4 per cent., and labor would be allocated £2,000, representing 4 per cent. on the wages earned. In this way a worker earning, say, £70 a year would receive a bonus from the firm of £2 16s., or 4 per cent. on his wages. As, however, the ultimate aim of the originators of the scheme is not merely to give a bonus, but to interest the workers personally in the company, and, in effect, to transform them into small capitalists, this bonus is given not in cash, but in the shape of fully paid shares in the company. Parts of a pound are carried forward, credited to the worker and added to the

bonus of the following year. As the company is constituted as much as possible on the lines of a private firm, these shares are not allowed to be sold to any but employees of the company. Indeed, the great wish and object of the originators of the scheme is that they should not be sold at all. The idea is that the employees should hold their shares, take an interest in their gradual accumulation, and thus, eventually, make the concern one in which every employee is personally interested, from the chairman and the managing-director down to the humblest worker in office or mill.

In order to get the scheme into operation as quickly as possible after its origination Mr. Taylor announced, when the system was commenced in 1896, that he would give to every one of the workpeople who had earned twenty shillings a week or more during the year 1895 two fully paid-up £1 shares to start with, and to everyone whose wages had amounted to less than twenty shillings a week one £1 share. At that time the workpeople numbered from six to seven hundred, and to carry out this undertaking cost Mr. Taylor about £1,000. At the end of the first year during which the profit-sharing system was in operation (1896) a dividend of 7½ per cent. was paid on capital, and, in accordance with the provisions of the scheme, a 3 per cent. bonus on wages was allocated to the work people in the shape of shares. The years 1897 and 1898 proved to be lean years. No profits were made, no dividends were paid, and, of course, there was no bonus on wages. Nevertheless, when at the end of 1899 a cash dividend on capital of 9½ per cent. was distributed, the losses of these two unprofitable years were not allowed to interfere with the bonus on wages for the successful year, the workpeople receiving their 5 per cent. on wages in the shape of new fully paid-up shares in the company.

It will be perceived that in regard to the 4½ per cent. secured to capital before the payment of any bonus on wages, that dividend, under the Batley profit-sharing scheme, is non-cumulative. This, from the capitalistic point of view, is, of course, a blemish, as on strict business lines it may be argued that since capital takes all the risks of bad years, it should at least have its 4½ per cent. return secured so far as to make it cumulative, averaging the losses of bad years over the gains of succeeding profitable ones. In this respect Messrs. Taylor's scheme errs in favor of the worker. There is a reason for it, however. It is to be found in the fact that Mr. Taylor, as a firm believer in profit-sharing, was more anxious to put his ideas to a thorough, practical test than to safeguard the interest on his capital. He consequently took this means to get the scheme into complete working order as quickly as possible, so as to give himself an earlier opportunity of studying its results and possibilities. It is easy to understand that to a keen business man enthusiastically intent on putting his theories to a practical test, the prospective loss of a couple of years' experience was of much greater concern than the sacrifice of a few thousands of pounds. This explanation is necessary in regard to what is perhaps the only point to which objection can be taken in a scheme which bears evidence of having been carefully and critically planned out on strict business lines in every single detail.

A Natural Growth.

Following the successful year of 1899 came three more successful years, in the profits of which the workpeople have shared to such an extent that their holdings in the company now amount to a very considerable total. As these continuous grants of shares to workpeople necessitate a fresh issue of capital each year, it will be seen that this particular form of profit-sharing might not be applicable to all businesses, but only to those which are continuously growing

and requiring fresh capital for extensions. In such businesses it simply represents the collective application of a principle which, applied individually, has led to the building up of at least nine out of every ten of our great industrial commercial concerns, viz., the principle of continuous extension by means of the investment in the business of the greater part of the profits realized therein year after year. Even in the possibility of a time arriving when further extension is impracticable, Mr. Taylor sees no serious difficulty in the way of continuing the issue of bonus shares. In all concerns the chief partners and shareholders gradually pass out of the business by death or retirement; and in the ordinary course of things Mr. Taylor foresees the day when he himself will wish to retire, and when that time comes it will be quite feasible for him to allow his own holding in the business to be taken up by the firm and gradually reissued as bonus shares. The leading men in the concern are all the time steadily acquiring a greater interest in it, along with the rank and file of the workers; and the gradual transference of capital from original to future owners is going on as in all healthy businesses, and will go on as easily and continuously under the profit-sharing system as under any other.

With regard to the status of the bonus share-holders, they rank equally in regard to dividends and have an equal claim on the assets of the company in case of liquidation, with the original capitalist shareholders, but their shares do not carry votes. The control of the company is thus secured to the capitalist shareholders. This, of course, is one of the points in which the system differs from the co-operative system, and constitutes one of its safeguards from the capitalist's point of view.

Two questions which are constantly asked in regard to the Batley scheme as to all similar undertakings are: "Does profit-sharing pay?" and "How do the workpeople take it?"

To deal with the latter first, Mr. Taylor and his colleagues—who are all of them heart and soul with him in his attempt to give practical effect to his ideas—declare themselves well satisfied with the way in which the employees have responded to their efforts. They have never had the slightest reason to suspect that there was any mistrust of them on the part of the workpeople, nor has there ever been any suggestion that the principals in the firm were merely working the scheme in their own personal interests.

As to difficulties and disappointments, difficulties there have been that have had to be carefully considered and met; and disappointment there has also been in one respect, viz., in the practice of the less thrifty section of the workpeople to turn their shares into cash as quickly as possible, thus defeating one of the chief aims of the originators of the scheme, which is to give every employee a financial interest in the business beyond mere wage-earning. The bonus shareholders cannot sell their shares to the public, but they can sell to their fellow-shareholders, and this is what about half of them do. On the whole the disappointment is not so very great, however. The originators of the scheme, and those who have control of the business, as will easily be gathered, are no hare-brained idealists, but practical business men. As experimenters in industrial reform, they would have been delighted to have had their modest anticipations exceeded and their faith in human nature strengthened; but, at the same time, as cautious business men investing their hopes in the bank of practical experience, they are not disposed to grumble at a return of 50 per cent. in realized results.

Does Profit-Sharing Pay?

Finally, with regard to the question, "Does profit-sharing pay?" The statement made at the commencement of this article is fully borne out by the experience of Mr. Taylor and his colleagues. Profit-sharing, they agree, is not to be recommended to the man who looks on his workpeople as part simply of a vast money-making machine, and who might be inclined to adopt profit-sharing as a means of exploiting his hands, and thereby increasing his own profits. A profit-sharing scheme with this object in view would most certainly bring no real satisfaction to the employer, and sooner or later would break down for lack of real sympathy and interest between employer and employed. Again, profit-sharing based on purely philanthropic motives, without regard to the common conditions of industrial life and commercial competition and the shortcomings of human nature, would defeat its own ends, since the concern to which it was applied would degenerate into a charitable undertaking and be no longer profitable. Speaking from personal experience, however, Mr. Taylor and his co-workers are satisfied that, to the employer of business-like instincts who is prepared to take his dividends partly in cash and partly in the pleasure derivable from the knowledge of doing a little good, profit-sharing may be confidently recommended. It will enlarge his views and his sympathies, and even in a monetary sense will, indirectly at any rate, bring its reward through the improved relationship and better understanding existing between employer and employed.

While profit-sharing is by far the most interesting feature in connection with Messrs. Taylors' concern, it is not the only one. Various other schemes have been instituted for benefiting the workpeople at the firm's mills. There is a sick and benefit club provided by the firm; there is the nucleus even of a technical school, there is a prize scheme for suggestions likely to be valuable in the firm's business, and other developments are in contemplation, in which every one of the principals takes a deep interest, finding therein not merely an outlet for their business capacity, but also much genuine pleasure and recreation. There is no disposition unnecessarily to hurry matters. All the schemes now in operation have matured gradually out of practical experience quite as much as out of theoretical impulse. The general practice is to go slowly, and let the new developments grow out of the conditions of mutual confidence between workers and managers, which are becoming more firmly established year by year.

ON COMBINES.

THERE are combines, good and bad. Some operate in the public interest, some against it. Just as freedom degenerates at times into license, so combines may, and it would seem frequently do, lapse from one class into the other. And in the midst of public perplexity eager would-be reformers rush in with the cry to "smash" something.

But before we begin to smash we must know what the fearful something is which is to be broken. We need a careful study of modern business, and a great deal of information about its results. Here in Canada, for example, we feel the need of expert statistical work in prices and other matters calculated to aid the people to come to an intelligent conclusion. Our Department of Trade and Commerce or our Department of Labor might broaden their work in this connection with great advantage to the country at large.

Business combines are certainly nothing new. One might almost say that they are "as old as the hills." In the Middle Ages regulations were common against "fore-stalling" and "regrating," which are only old names for very old and yet very modern practices. In our day trade combinations are met with in almost all departments, alike in retail trade and in large-scale industry. No country may be said to be without them. They thrive in free-trade England as well as in the highly protected United States. This great difference there seems to be as regards the conditions of the minds of business men in the United States: that there the success of the Standard Oil combination and of a few others has captivated the imagination of the people. The limitations of monopoly not being perceived, there has been a readiness to believe that every combination is a practical gold mine. Moreover, the wonderful concentration of wealth due in part to the extraordinary natural wealth of the country and to the unprecedented wave of speculation has helped to make people in many ways thoughtless and ruthless.

Certainly combines are not charitable institutions, and at their hands abuses may be just as common as advantages, or perhaps more common. Modern democratic minds are prone to think that where monopoly is abuses are bound to crop up if not carefully watched, for example, with railways as well as with political patronage, with retail as well as with wholesale trade, with workmen's as well as with employers' associations.

Modern business organization is based on the supposition of free competition; and in the long run where free competition does not exist some external control is necessary. Lines of business there are which are largely centralized, and readily admit of understandings being come to between interested parties. In other lines competition is so scattered and multifarious that any understanding of wide import is practically precluded.

Sometimes international competition is possible. In this event the removal or lowering of a customs tariff, if such exists, may work relief. Sometimes, however, international agreements exclude foreign competition, and then monopoly reigns supreme regardless of tariffs. This is the case also where from special causes local monopoly exists. It would be quite wrong, therefore, to think that free trade necessarily kills monopoly or necessarily benefits. International free trade would very probably lead to still more ambitious and complete organizations of manufacture and sale than the world has ever seen before. Perhaps the most important discussion of industrial combinations ever held in Europe was that which took place at a gathering of the German Union for Social Politics in Vienna in September, 1894. (Austria, it will be remembered, has long been a hive of trade combinations.) The meeting was attended by economists of the first rank, and the discussions were most instructive, but anything resembling the cry to uproot or destroy was not heard. The proposals for reform related to more effectual control, especially where business developed monopolistic tendencies.

The whole question of combines is, indeed, one of the great problems of our society. It is not merely part of a tariff policy; it is part of general civil law and of social ethics. The newspaper manager in his advertisement department knows this as well as the manufacturer and the walking delegate, the wholesaler and the shopkeeper, the banker and the insurance company director and the plumber. The only difference is all are not plumbers or great financial directors.

S. MORLEY WICKETT.

THE IRON ORE SUPPLY OF THE WORLD.

(From The Metal Worker, Plumber, and Steam Fitter.)

At the last session of the Swedish Parliament the Finance Committee called for a report on the extent of the known iron ore deposits in Sweden and the amount of available native iron ores, as compared with those of other manufacturing countries of the world, and the chief of the Swedish Geological Survey Department, Professor Törnebohm, was directed to submit such a report to the Government. This report as well as critical comments on it by Professor Sjögren and the further report by Professor Törnebohm and General Manager Lundbohm of the Kirunavare mines are presented in full in the September number of the

some 35,000,000 tons of ore to supply the present needs of the United States iron and steel industry, and this demand being constantly on the increase, there is little wonder that some of our greatest iron makers have expressed their anxiety as to the possibility of finding an adequate ore supply even for the near future.

Total for All Countries.

To further elucidate this subject, in the following table are given the quantity, in round numbers, of the estimated known workable ore bodies, and the present annual product, consumption and exportation of iron ores of the leading iron producing countries in the world.



THE IRON ORE SUPPLY OF THE WORLD, INDICATING THE PRINCIPAL KNOWN DEPOSITS

"Teknisk Tidskrift." As it contains some very interesting data the following article, embodying the substance of the different reports, together with certain additional information pertaining to the subject, have been prepared for our readers.

The accompanying map shows the location of the deposits of iron ore in the various countries to which reference is made.

The American Continent.

We find that the known large ore bodies of this part of the world are situated in the United States; the Canadian ores, as well as the South American ores, not having as yet been sufficiently exploited to be taken into consideration. The ore fields referred to are the following:—

	Tons.	Iron. Per cent.	Phosphorus. Per cent.
Lake Superior ranges:			
Mesaba	500,000,000	52 to 65	0.03 to 0.08
Other ranges	500,000,000	55 to 67	0.01 to 0.15
Alabama br'n hematite..	60,000,000	45	0.1 to 1

The total output of the lake ores (from 1855 to 1904) amounts to some 250,000,000 tons. Based upon the present annual output the total known ore supply would be exhausted within the next fifty years, but with a constantly increasing output they would not last even that long. The Mesaba ore, with the present annual output of about 12,000,000 tons, would, it is estimated, be worked out in the next fifteen to twenty-five years. The Alabama districts have no large ore reserves, and the new East and South districts are uncertain, as also the Western ores, and these cannot, therefore, be counted on at present. With an annual demand for

	Present Workable ore fields.	Present annual output.	Present home consump- tion.	Present annual export- ation.
	Million tons.	Million tons.	Million tons.	Million tons.
United States	1,100	35	35	..
Great Britain	1,000	14	20	..
Germany	2,200	21	24	2
Spain	500	8	1	7
Russia and Finland	1,500	4	6	2
France	1,500	6	8	..
Sweden	1,000	4	1	3
Austria-Hungary }	1,200	3	4	..
Other countries }		5	1	2
Totals	10,000	100	100	16

The world's iron requirements, which in 1800 were only about 2,000,000 tons, have since increased by leaps and bounds, as is seen from the following table, showing the world's total pig-iron production during each quarter of the century:

	1800-25.	1825-50.	1850-75.	1875-1904.	Totals.
	Million tons.	Million tons.	Million tons.	Million tons.	Million tons.
Great Britain ...	8	40	120	230	398
France	3	10	25	56	94
United States ...	2	9	31	245	287
Germany	2	7	23	145	177
Others	5	14	31	94	144
Totals	20	80	230	770	1,100

By allowing for low grade ores and waste it has been estimated that the corresponding ore consumption up to date has totalled 3,300,000,000 tons, and as last year's pig-iron production reached nearly 50,000,000 tons, the present annual ore requirements must be from 100,000,000 to 150,000,000 tons. At the present rate of consumption, therefore, at least 10,000,000,000 tons of iron ore, or the whole stock in sight, would be required before the end of the present century. By allowing for the increased consumption at the rate of the increased output during the last thirty years Mr. Hadfield, in his presidential address before the Iron and Steel Institute in May last, arrives at the conclusion that 45,000,000,000 tons of iron ore will be required during the present century.

With the above facts before us and considering the diligent exploration work lately going on all over the civilized world it appears questionable if the new iron discoveries will more than suffice for taking care of the increased home consumption which generally develops with the advance of civilization and the settlement of a new country. Nature's iron supply will probably never be exhausted, but the iron and steel industry will long before the end of the present century undoubtedly have to depend upon and be compelled to utilize many bodies of ore now considered of too lean and inferior a quality for furnace use, made possible by means of roasting and improved concentrating processes, also by new processes for smelting and refining which will be evolved in due course of time.

Conclusion

In conclusion Professor Törnebohm makes certain predictions as regards the probable development of the future iron industry, the principal ones being as follows:—

1. The ore fields of the present large producing countries—namely, North America, Great Britain and Germany—will be exhausted within one or two centuries, and the high grade ores much earlier.

2. The future centre of the iron industry will, as now, be located where natural fuel abounds, "as the ore travels to the coal and not *vice versa*."

3. As a consequence Great Britain, whose coal supply it is estimated will be exhausted within about 250 years, will thereupon cease to be an iron producing country, while in the United States and Germany, with their much larger coal areas, the iron industry will continue, although being dependent upon imported ores. For the same reason North China, where coal and iron are found associated together, is looked upon as a promising iron centre.

From the last two paragraphs Professor Sjögren takes strong exceptions, contending that the fallacy of this dogma has long been proved and that a great iron industry depends on other factors fully as important as the fuel question, such as the extent, richness and purity of the ores, freight charges for ores, coal and iron products, traffic regulations, etc.

Canada's Iron Ore Deposits.

In the above report the statement is made that Canadian ores have not yet been sufficiently exploited to be taken into consideration. While this is unquestionably correct, there are those of us who feel that this country will yet be a factor in the iron ore production of the world. Dr. P. L. T. Heroult, Technical Director of the French Electro-Metallurgical Society, who recently came to Canada to conduct some experiments in electric smelting, predicts that in ten years we will have become a great metallurgical country, with larger iron industries than any other country in the world.

The iron ores of Canada are widely distributed and embrace almost every known variety, including hematites, magnetitic carbonates, chromic ore and bog ore. The rich Wabana mines of the Dominion Iron & Steel Co., and the Nova Scotia Steel & Coal Co., on Great Belle Island, Newfoundland, are said to contain twenty-eight million tons in one outcrop, with practically inexhaustible quantities below the sea. In New Brunswick large deposits of hematite ore are found near Woodstock, Carleton County. Along the shores of the St. Lawrence, from Saguenay to the Straits of Belle Isle, are vast quantities of magnetic sand capable of producing the finest iron, while inland, along the Manicougan and Hamilton Rivers, and in the vicinity of Lakes Minelek, Astray and Dyke, are deposits still more rich and more vast. Ontario boasts of extensive deposits of lean magnetite in Madoc, Marmora and Belmont Townships in the East, and higher grade ores in varying quantities all through Nipissing, Parry Sound, Algoma, Thunder Bay and Rainy River districts. The well-known Helen Mine at Michipicoten is yielding on an average 300,000 tons a year. Almost every week brings word of some fresh discovery in the promising region about Lake Superior, along the continuation of the Mesaba and Vermilion Ranges, which have made the United States famous as an iron ore producer. Westward, on Lake Winnipeg, in Southern Alberta, on Vancouver Island and Texada Island, further deposits of supposedly great wealth are known to exist, whose development will certainly follow upon the first signs of exhaustion displayed by the soft ore mines about Duluth.

As yet our production is small. In 1904, some 350,000 tons was all that was raised in Canada, the Helen Mine alone being responsible for 85 per cent. of that amount. But with the active development work now going ahead on the Atikokan and Loon Lake Ranges this total may be expected to increase rapidly, and when Dr. Heroult's process of electric smelting has been perfected, making merchantable ore out of all low grade magnetites running from 45 to 55 per cent., there will be practically no limit to our possibilities in the way of ore production.

ALCOHOL AND TURPENTINE FROM SAWDUST.

Patents have been taken out by a Tennessee inventor for the production of turpentine from sawdust and chopped up slabs at the rate of two gallons per ton of sawdust. Methyl alcohol is likewise obtainable by the processes covered by the above patents. It is estimated that a mill cutting 60,000 feet of lumber per day can thus make \$52 net profit per day out of what is now waste. The cost of the machinery necessary for a mill of the above capacity is estimated at \$9,000.—*American Industries*.

STIMULATING PLANT LIFE.

It is proposed by the United States Department of Agriculture to test the effect of electricity on plant life and growth. A laboratory is being equipped in the division of pathology to conduct experiments in the growing of plants by the aid of an electric appliance. The experiments will be based on the theory that the growth of vegetable matter, which ceases at sun-down, will continue through the night if proper artificial light is supplied to stimulate the developing powers of plants. Experiments will be made largely on lettuce, which has been found peculiarly susceptible to electrical influences. The plants will be kept under a strong light during the night, with a view to having the electrical rays take the place of the sun. It will probably take a year or more before actual results are obtained from the experiments.—*Electrical World and Engineer*.



TRANSPORTATION DEPARTMENT



RAILWAY COMMISSION TAKES ACTION RE CAR SHORTAGE.

THOSE who have seen the progress of their business handicapped each year for months on end by reason of the inability of railways to supply cars will doubtless be gratified to learn that in consequence of complaints received from various quarters the Board of Railway Commissioners has decided to make a full enquiry into the whole subject of car shortage. By order of the board its traffic officer, Mr. Hardwell, is directed to make an enquiry and report as to whether during September and October the railways have been allotting their locomotives, cars or other rolling stock so as to discriminate against any locality or industry, or in favor of foreign as opposed to domestic traffic; also as to whether the present system of distribution of locomotives and cars is fair and reasonable in view of the various interests affected, and if not, in what respects same should be changed. Another order requires the same officer to investigate and report as to whether the railways have such a supply of locomotives and cars and other rolling stock as is reasonably necessary and sufficient to enable them to avoid failure in the receipt, carriage and delivery of traffic without delay, as required by the Railway Act, and, if not whether the insufficient supply of locomotives and rolling stock is owing to default on the part of railways to take reasonable care and measures to secure a supply; also as to whether the railways have taken such steps as are necessary to procure from time to time such additional supplies of cars and other rolling stock and appliances as the probable future increase of traffic seems likely to require. The order further requires the traffic officer to report as to what measures for the prevention of the continuance or recurrence of the failure on the part of the railways to furnish adequate equipment should be taken by the companies or by the Board.

It is apparent by the wide scope of the enquiry directed to be made that some time will elapse before the Board is in possession of such information as will enable it to take action in the premises. There has been a general feeling amongst those who suffered by reason of the frequent recurrence of the car shortage that the railways in Canada have not kept up with the development of the traffic by increasing the rolling stock and other equipment.

Some years ago, after the harvesting of the crop in Manitoba and the North-West, it was usual to hear vigorous and general complaint from that quarter of the absolute insufficiency of the railway equipment to handle the crop. The excuse of the railways then, as now, was the impossibility of supplying a sufficient number of cars for the handling of crops because of the fact that to do so would mean the purchase of a large amount of rolling stock which would have to remain idle for the greater part of the year. This year there has been a notable absence of complaint from the North-West, due, no doubt, to the fact that both the Canadian Pacific and Canadian Northern Railways have made extensive additions to their rolling stock. But east of the Great Lakes the trouble has been more acute, and the car shortage has had its effect upon all classes of industry.

The Board of Railway Commissioners recently held a special hearing on account of an urgent complaint by the Dominion Millers' Association of discrimination in the

allotment of freight cars at Georgian Bay and lake elevator ports, in consequence of which a number of mills were closed down, and all were suffering financial loss. The Grand Trunk Railway admitted discrimination in the allotment of its available car supply, but claimed that the discrimination was not undue or unreasonable in view of the fact that it was imperative that the available cars should be used where necessary for the transferring of export grain from the lake port elevators to tide water. The Board of Railway Commissioners, however, have decided against the railway, and have issued an order requiring them to so allot their freight cars at the elevator ports as to take reasonable care of the requirements of the local milling trade.

Those shippers who have reason to believe that they are being unduly discriminated against in the allotment of freight cars are at liberty to report the facts to the Board of Railway Commissioners, and in this way will no doubt assist the Board in its general enquiry into the subject.

LIMITATION OF LIABILITY BY CARRIERS

A DECISION recently announced by Mr. Justice Teetzel in the case of Biskey v. Canadian Pacific Railway will serve to illustrate the indifference sometimes shown by those who make special contracts with railway companies for the carriage of their goods, under the terms of which the liability of the carrier is limited.

The case arose over a shipment of household goods from Sault Ste. Marie to Wahnapiatae. In the Canadian classification household goods are rated first-class if shipped at owner's risk and released, or they may be accepted at carriers' risk at 50 per cent. additional rate. It is customary for the railways to ask shippers of such goods to sign a special contract in which it is stipulated that the liability of the carrier is limited, in any event, to an amount not exceeding \$5.00 per package. Such a contract was signed by the plaintiff. The goods were not delivered at the point of destination, and, in consequence, the owner made claim upon the carrier for the value of his property. The railway, acting under the terms of the special contract, tendered an amount of \$15.00, being at the rate of \$5.00 per package, but this the owner indignantly refused. Suit was brought in the courts, and at the trial it was stated the shipper in signing the special contract did not understand he was becoming party to a special contract relieving the company from all liability beyond the sum mentioned. He understood the contract signed was a regular shipping form which he was required to sign before he could secure the transportation of his property. Under the terms of the Railway Act carriers are not prohibited from limiting their liability as insurers of goods entrusted to them for carriage, in consideration of certain reductions in the freight tolls, so long as they do not contract themselves out of liability for negligence or omission. In this case, it will be observed the contract did not relieve the railway from liability for negligence, but merely limited the amount of damages, which the owner could collect in the event of loss occurring for which the railway was responsible. Although the loss was clearly attributable to neglect or omission on the part of the company, the court had no alternative than to award plaintiff damages to the extent of the restricted valuation stipulated in the special contract which he signed.

The forms of contract in use on railways have been approved by an interim order of the Board of Railway Commissioners. It is understood, however, that all traffic forms and contracts will be the subject of revision by the board in the near future. Should the board then authorize railways to continue a special form of contract limiting their liability, it should be required that a special notice, such as adopted by some English railways, calling attention to the limitation of liability and to the fact that shippers have the alternative of transportation at carriers' risk at a higher rate, be printed in bold type on the face of the contract.

RECIPROCAL DEMURRAGE.

THE situation to-day in respect of shortage of motive power and rolling stock on railways throughout the country furnishes a good argument to those who favor a system of reciprocal charges against railways for delay in supplying cars and in transporting and delivering freight. Under the present circumstances shippers who cannot secure the cars they require are prevented from marketing their goods. This necessarily involves the owners in considerable expense for warehousing, insurance and bank interest, to say nothing of the possible loss of market through delay, for which they have no means of securing redress from the railway. On the other hand, it is quite possible for railways, after protracted delays and without warning to shippers, to furnish the cars for which they are waiting, or to deliver overdue shipments at destination when wholly unexpected by consignees. In either case, if cars are not loaded or unloaded strictly within the period allowed under the car service rules framed by the railways, regardless of the circumstances of the case, demurrage charges are imposed. Railways expect the public to accept their explanations of unusually heavy traffic and congestion of facilities as reasonable excuse for delay, but refuse to take any circumstances short of *vis major*, as reasonable excuse for delay by shippers or consignees. It is undoubtedly right that there should be some regulation, and perhaps penalty, to prevent the misuse of, or unwarranted delay to, equipment by the shipping public, but should not such penalty also be imposed for delay to traffic when the responsibility rests with the railway? If it is reasonable and right that a shipper or consignee who delays rolling stock should be penalized, is it not also right that the railway which fails, through lack of adequate and proper equipment, to supply rolling stock, or to transport loaded cars within a reasonable time, should be mulcted for its neglect or omission? The Railway Act requires carriers to provide adequate and reasonable facilities for the receiving, carrying and delivering of all traffic without delay, and under this statutory enactment it would seem there should be some penalty imposed where the railways are at fault, and fail to comply therewith, more particularly when they penalize shippers and consignees for failure to comply with their car service regulations.

The establishment of a per diem charge for the interchange of freight cars between railways has resulted in effecting the prompt return of cars from foreign lines to the owners. If a per diem charge, which is admittedly only a "nominal" one, is attended with such good results, doubtless the application of reciprocal demurrage charges against railways would effect a wonderful change in the supply of cars and movement of freight for the benefit of the public.

Unless a marked improvement in the car situation is shortly brought about, we may expect a movement on the part of the shipping public for legislation looking to the

application of reciprocal demurrage charges against railways for failure within a reasonable time to supply cars when ordered to transport freight traffic.

RAILWAY FREIGHTS IN GREAT BRITAIN.

WE publish below a letter which has been received from Mr. Herbert J. Rodgers, of London, Eng. The communication is a very interesting one. It shows that the difficulties which we encounter, and are endeavoring in some small way to correct with regard to excessive rates and intricate and discriminatory classification are also felt by the traders of Great Britain. Doubtless the over-capitalization of railways stands in the way of a proper levelling-up of freight rates. The railway stock has been marketed, and is held by third parties, who look to the country for protection in their investments, and, if the country undertakes to unduly restrict the earning power of the railway, it necessarily reduces the value of the shares.

In discussing rate regulation it is pointed out by many writers that if the Government undertakes by restrictive legislation to reduce freight tolls they must also undertake to reimburse those whose investments are thereby depreciated in value. The question is a very wide one, but it is one which unfortunately the great mass who are undoubtedly interested do not give very much consideration to.

The control of waterways by railways in a measure destroys the effectiveness of rival transportation routes and makes for increased freight tolls. There is nothing like independent transportation companies with effective competition to keep down freight rates.

Mr. Rodgers' letter is as follows:

To the Editor of INDUSTRIAL CANADA:

Canadians who have visited England must have been somewhat surprised at the anomalies and inconsistencies that exist in our railway freight system.

A short account of the position of railways and their freight charges, and extenuation and a condemnation of them, and a possible if partial remedy for existing evils may be of interest.

From the point of view of an ordinary trader, a subject of such vastness can only be treated superficially. Holding no brief for or against, I recognize in our railway companies, as well as those of other countries, a great power for creating, moulding, and maintaining industries. The nation whose railways and industries are to the greatest extent "in partnership" has at the outset a very big start in the struggle for commercial supremacy.

The next feature that claims recognition is the cast iron fact that railways here are non-competitive. Who can wonder then, that under these conditions the charges are excessive and full of anomalies, hampered also as they are by a stereotyped system of bewildering classifications?

The next feature that claims recognition is the cast iron nature of the limits within which the relations of industry and railways are conducted. So far is this the case that it is out of the question for any trader to obtain any concession in rates however special the circumstances are that warrant it.

To illustrate by comparison: In catering for passengers every effort is made to secure more traffic. Tourist tickets are offered at reduced rates. Half-day trips, day trips, eight-day trips, and trips for almost any period of time are advertised at very low fares, and are an inducement to the population to patronize the railway. There are cheap tickets for all kinds of parties: Sunday school, theatrical, football and cricket, etc. In a word, every bait is used to attract the travelling public.

To this state of affairs, no objection can be raised. But turning to freight traffic, we see there no freight trips. Why should they not exist? This is no frivolous question. Further the spell of excessive immovable rates is not on railway freights alone, but the canal rates and coastal shipping rate are largely dominated by railway companies, and without speaking too positively on the point I believe that most of the water rates are scheduled under "railways convention." What this control means to an island like England, where so much more coastal trade might be done and where there is such a magnificent net-work of canals all over the country can scarcely be imagined.

In extenuation of the high charges of our railways there is much to be said. There are three main features.

1. All our railway systems are assessed for parochial and other taxation on a system which is greatly unjust to the railways, and on a basis which is not applied to any other form of assessable hereditament. This burden is one that not only costs the companies enormous sums in taxation, but also, in order to keep their assessments within such limits as the hazy rating laws of this country admit, every railway company maintains a special rating staff, who devote their attention to the combating against and adjustment of the assessments imposed on the various sections of their system. This entails a continuous charge on the company.

2. English railways are, it is admitted, over-capitalized, because they have been forced to pay and still continue to pay excessive sums to acquire the land over which their systems are built.

3. The fact that British railways are so immune from disasters of all kinds is a virtue which is the result partly of our sound, if at times exacting, laws to which the railways conform and partly of the excellence of the rolling stocks and metals, and, in fact, of all the working parts of our systems which are so carefully planned and supervised. To maintain this is an onerous charge on the companies, and tends once more in the direction of over-capitalization.

To meet the enormous demands of the three foregoing "non-earning" sources of expense the companies impose heavy freight rates. Railways are after all dividend-earning machines; whether they are dividend-earning machines first and public servants second, or vice-versa, is a point on which I will not express an opinion.

So much in extenuation of the excessive rates, though there is more that could be brought forward to the same effect.

In condemnation of the high rates I say first that the existing high rates are in toto a disastrously short-sighted policy. With lower rates the companies would carry more traffic, they would induce traffic in agricultural, and other parts of the country where at present the initiative for such growth is stifled, they could make it possible to create works in parts where cheap labour, cheap power, and cheap coal and cheap land are available, they would secure more double traffic, i. e., both to and fro, and they would, I think, make the proverbial two blades of grass grow where one grows now.

Further condemnation is to be found in the existence all over the country of vast concerns of "general carriers." These concerns collect and distribute goods all over the country and beyond, employing, of course, the railways to a very large extent. They are, in fact, in the nature of subcontractors to the railway companies, and a proportion at least of their earnings represents a sum that might be conceded to the commercial community, were the railway companies to extend their work in the same direction. There is nothing to say against the enterprise, and sterling value

of the "general carriers," but one must condemn the railway companies for letting slip out of their hands such a field of income to themselves, and economy to their customers.

Finally, in the matter of high rates, the systematic endeavor on the part of railway companies to control canal and coastal rates is as short-sighted as it is burdensome to trade in its effect. In the canal system of the country we have a natural means of cheap transport at a slow speed, but capable all the same of enormous service to a much wider range of industries than it is at present applied. This more extended employment of the canal system would inevitably create more remunerative and bulkier traffic for the railways. The same applies to the coastal traffic.

In conclusion, is there any remedy, partial or complete, by which the high freight charges of railway companies can be reduced to a much lower level? It has been said that the solution lies in the nationalization of our railway systems. It may be so but this is a very remote, if possible solution. The solution easiest to bring about lies in the hands of the railway companies themselves. I have already said that were the companies to reduce their rates, and let the coastal and canal traffic follow their natural and unfettered development, they would secure greater and more remunerative traffic, and at the same time benefit and foster trade enormously. This view is not shared by the companies themselves, or they would have put it into effect long ago. Other remedies in minor ways are:—

1. Relief should undoubtedly be given to the companies in the matter of assessment for taxation, but on condition that the benefit of such relief were shared with the trading community by the reduction of rates.

2. A simple classification of merchandise, and the removal of some of the existing anomalies in connection therewith might be introduced in the direction of lower charges.

3. The adoption of the large truck system for certain classes of goods should certainly make for economy. This has been tried, and in effect condemned, but its partial adoption is a matter that the companies might display greater enthusiasm about.

Between Parliament and the railway companies lies the ultimate remedy. The whole subject is one that so keenly affects the trade of the country, both at home and abroad, that it is devoutly to be hoped we shall soon get a House of Commons that will broad-mindedly tackle the subject root and branch. Parliament has given to the railways in their charter a vast trust for the benefit of the community. The trading community has, therefore, a right to see that they get from the railway companies the fullest measure of economical service.

Yours faithfully,

HERBERT J. RODGERS.

Saracen House, Cock Lane,
London, E. C., Nov. 2nd, 1905.

The Man and the Opportunity.

Members of the Association in Winnipeg are eagerly looking forward to the next year's convention, as marking the time when their city will start making history as a manufacturing centre. Recognizing, as they do, that the manufacturer is usually a shrewd, far-seeing individual, they are in hopes that many of those who attend the meeting will start branches, or better still, will start their brightest sons up in business in the "Gateway of the West." A country of such tremendous potentialities, with its ever widening markets, must eventually have its own equipment of industrial establishments, and it will be to those who are early in the field that the richest prizes will fall.

STRIKE OF MONTREAL LEATHER CUTTERS.

A STRIKE of Montreal leather cutters, apparently for the purpose of securing higher wages, but in reality to force a union shop upon a number of boot and shoe factories, has resulted in failure. This strike was declared not at the request of the men, but under instructions from officers of the International Union, and is a typical case of the unreasonable methods which labor agitators sometimes adopt to carry their ends.

At the end of October the International Boot and Shoe Workers' Union served upon a number of Montreal manufacturers a new scale of wages which they must pay to their leather cutters on and after November 6th. The firms receiving this notice had not recognized the International Union. They were: The Jas. McCreedy Co., Ltd., Dufresne & Locke, Daoust, Lalonde & Co., Tetrault Shoe Co., Kingsbury Footwear Co., Jas. Linton & Co., Laniel & Co., and others.

The new scale provided that the minimum weekly wage should be fixed at \$12, while there should be an average increase of 30 per cent. in the prices paid for piece work.

The manufacturers thus notified objected to any change in the wage scale being made at present, as the samples for the spring trade had already been prepared and the goods sold.

The representatives of the International Union then suggested that the matter be arbitrated. A meeting of the manufacturers was held when it was decided to agree to arbitration provided the new wage scale did not come into force until April 1st. This proposition the labor people refused to entertain. After further consultation an agreement was reached whereby the arbitration would take place at once and the new wage scale then determined upon should come into effect on November 6th.

On the day in question the men came to work as usual, all satisfied that any difficulties would be settled by arbitration. On the same afternoon the business manager of the International Union telephoned to the managers of the factories stating that he had decided that he would not arbitrate the matter, and that unless the new scale of wages was paid, the men would be called out on the following morning. The cutters at work, when informed by the managers of the factories, refused to believe that the International Union organizer had taken any such steps. However, they did not return to work next day, giving as their reason that they had to abide by the constitution of the Union, and obey the orders of their business manager. In all, about one hundred and fifty men left work.

That the question of wages was not of as great importance as the value of bringing these factories under the control of the International Union is evidenced by the following facts. The Union demanded a minimum wage of \$12 a week, whereas in several of the non-Union factories, the leather cutters were earning by piece-work from \$12 to \$15 a week, and even higher. The Union declined to arbitrate the question of wages with the non-Union factories, but agreed to do so with the factories under their control.

The International Union officials withdrew the men from these factories and employed every means to prevent new men being put in the jobs. A number of the men who had been called out on strike were sent to St. Hyacinthe and other towns where they were put to work at lower wages than they could obtain in Montreal. Others for whom employment could not be found were granted strike pay by the Union. In spite of these facts the factories have secured men from other points, and are again running full-handed.

HOW THE DUMPING CLAUSE WORKS OVERTIME.

A WESTERN correspondent sends us the following illustration of how the Customs regulation regarding freight allowances sometimes works a serious injustice to the Canadian importer.

According to the regulations of the Customs Department, when the difference between the fair market price of goods in the country where they are produced and the selling price to the importer does not exceed five per cent., the imports shall be exempt from the dumping tax. When the difference exceeds five per cent., the dumping clause applies.

When manufacturers in the Eastern States grant a freight allowance to jobbers west of the Missouri River, which allowance is made alike to all jobbers whether United States or Canadian, the Customs officers in Vancouver (let us say) are instructed by their superiors that such allowance is a reduction from the fair market value. Consequently it is appropriated by the Government and the importer fined. This is done in the face of the fact that every jobber in the United States west of the Missouri is granted the same freight allowance!

Of course the next time the British Columbia jobber buys goods from the Eastern United States manufacturer, he tells him to keep his freight allowance. The result is that the Seattle jobber, who gets his freight allowance, is able to make his usual profit and under-sell the Vancouver jobber with the same goods right in the Vancouver jobber's territory.

Take the matter of steel wedges bought in Philadelphia for instance. This is how it works out:—

Vancouver merchant buys in Philadelphia for	\$4.50
Duty, 30 per cent.	1.35
Freight	1.00

C.L.D.	\$6.85
15 per cent. profit	1.02

Selling price in Vancouver	\$7.87
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Seattle merchant buys in Philadelphia for	\$4.50
Less freight allowance	50

Cost in Philadelphia	\$4.00
Freight	1.00

C.L.D.	\$5.00
Profit, 15 per cent.	75
Selling price to Vancouver consumer	\$5.75
Consumer pays 30 per cent. duty	1.62
Consumer pays freight to Vancouver	10
C.L.D. in Vancouver	\$7.47

It is thus readily seen that the Customs order declaring that a freight allowance cannot be allowed under the dumping clause, merely has the effect, in the west at least, of giving the neighboring United States competing jobber an advantage over the Canadian jobber, as it enables the former to under-sell the latter right at his own door, and under his very nose with the self-same goods and on the same percentage of profit.

LITERATURE FOR BUSY BUSINESS MEN.

Restrictive Railway Legislation. By Henry S. Haines. The Macmillan Company, New York: Morang & Co., Limited, Toronto, 1905. \$1.25.

This book contains a general review of the development of restrictive legislation in the relations of the state to the railroad systems of the United States. Commencing with the introduction of railways and the granting of initial franchises and charters by state legislatures, the progress of restrictive legislation is traced up to the enactment of the Interstate Commerce law and amendments thereto. While essentially a contribution to the current literature arising from the present agitation for further regulation of railway rates in the United States, there is much in the book of interest and value to the student of the so-called transportation problem in Canada. The effect of railway competition upon trade and commerce is dealt with in a chapter on Railway Traffic. Other chapters on the complex questions of Rate Making and Regulation of Rates contain instructive information concerning discriminatory competitive and non-competitive rates. The author does not side with those who favor government ownership of railways as a means of overcoming the objectionable features of the present system, and in a chapter on State Control of Corporations points out the great difficulties in the way of accomplishing this and the evils which may result.

A Commercial Traveller in South America. By Frank Wiborg, McClure, Phillips & Co., New York, 1905, pp. XXVI., 159, \$1.

In the hurry of good times in our own wide country we run the risk of overlooking the simultaneous opening up of South America. The advance of Canada in the north, and of South America in the south are big facts in the recent history of our continent.

The author of the present little book gives a very readable and instructive sketch, interspersed with a number of good photos, of a business trip across Panama down to Valparaiso, where ever since the scarcity of men during the war with Chile the conductors of street-cars have been women, across Argentina, where they count cattle by "the feet," not by "the head," to Buenos Ayres where conductors start trains by clapping their hands, and back home via Sao Paulo, Rio and Bridgetown. Mr. Wiborg is a member of a large Cincinnati firm and writes well. In making the country seem very real to the reader he seeks to arouse more interest in United States' trade with the South. Easy-going, pleasure-loving, wonderfully rich and very progressive in spots, with a number of large and beautiful and voluptuous cities, and with impressive scenery, the South Americans and South America interest the traveller greatly. It may not be amiss for Canadians, too, to have South America more in mind for travel and markets. Its hides, wool, coffee, hardwoods and chemicals we need; it needs all kinds of machinery and manufactured goods. An indication of local conditions is given by the population of some of the cities. Buenos Ayres has a population of a million and a half, Rio de Janeiro of nearly a million, Santiago of three hundred thousand, Sao Paulo of upwards of two hundred thousand. The danger of epidemics has been much reduced by stringent sanitary precautions. Political conditions are much better than often described, though the lack of popular belief in the purity of government officials weakens sober, hard-headed, support of the state in its operations against occasional disorder and in favor of consolidation and progress.

Poems of the Love of Country.—Selected and edited by J. E. Wetherell. Morang & Co., Limited, Toronto, 1905. Cloth, 144 p., 75 cents.

In the introduction to this little volume, the author quotes a Scotchman as saying that if a man were permitted to make all the ballads he need not care who should make the laws of a nation. While this remark is not to be interpreted too literally, it nevertheless strikes a true chord when it emphasizes the wonderful influence of ballad literature on the upbuilding of national sentiment. Incidentally it explains the pleasure and satisfaction one experiences in reading over the collection of poems which follow. Every line of the book breathes loyalty and patriotism. Naturally British sentiment preponderates, but true love of country is recognized wherever found, and "The Star Spangled Banner," and "Ima Toki Naru Zo," a popular Japanese ballad, are to be found side by side with "God Save the King," and the martial songs of England.

Professor Ely on Monopolies and Trusts.

Now that public opinion in Canada has been stirred on the subject of combines a few extracts from Professor Richard T. Ely's recent volume, "Monopolies and Trusts" (Macmillan, 1902), will interest the reader of INDUSTRIAL CANADA.

"The trust movement, so called," says Professor Ely, "means at the present time nothing else than the general tendency towards increased size of the business unit. . . . Formerly the trusts were businesses which found unity through trustees, into whose hands they were placed for management. Trusteeship was simply a mode whereby combination was effected. When legislators, who failed to look below the surface, outlawed this sort of trusteeship, other modes of union were formed, especially the vast corporation which absorbed the smaller corporations. It must be clearly understood, then, that there is no such thing as a trust problem in itself. The trust problem, as it is called, means the widespread tendency to do business on a large scale. The so-called trusts are not a bad thing, unless business on a large scale is a bad thing. On the contrary, when they come about as the result of a free development they are a good thing, and it is a bad thing to attempt to break them up."

"But when people talk about trusts," he goes on to say in discussing the complexity of the subject, "they have problems in mind which are real and genuine. Analysis reveals that we have here to do with three main problems: First, a monopoly problem; secondly, a problem of industrial concentration; and thirdly, a problem of wealth concentration."

Referring to the extravagant observations of yellow journalism, he continues: "Comment on these utterances of the press is scarcely necessary to-day. If there is any serious student of our economic life who believes that anything substantial has been gained by all the laws passed against trusts, by all the newspaper editorials which have thus far been penned, by all the sermons which have been preached against them, by all the speeches of politicians denouncing them, this authority has yet to be heard from. . . . The writer does not hesitate to affirm it as his opinion that efforts along lines which have been followed in the past will be equally fruitless in the future." And he later on remarks that "the effect of constitutional and legislative enactments against trusts thus far has been to increase centralization and to strengthen monopoly rather than otherwise."

AMONG THE INDUSTRIES

THE MANUFACTURERS OF CANADA.

Details regarding the subject of this month's sketch have been somewhat difficult to procure. Not that Mr. Amyot is not a well-known man. Down in his native city of Quebec it is said that everybody knows him, and outside the city, through the Province and throughout the Dominion, there are hosts of people who are proud to call him their friend. But Mr. Amyot dislikes to talk about himself for publication. "These writing up ideas I am not much in favor of," was his characteristic reply when interviewed by INDUSTRIAL CANADA, and the few particulars which are presented below were supplied only with the greatest reluctance.



No. 20. MR. GEORGE E. AMYOT.

George E. Amyot was born in Portneuf County, Quebec, on the 28th of January, 1856. At the age of seventeen he left school and went into business, forging his way ahead with signal success for thirteen years before taking up with his present line of trade. It was in October, 1886, that he formed a partnership with a Parisian named Léon Dyonnet, for the purpose of manufacturing corsets. The small factory which was the scene of their initial operations was the first garment factory in the city of Quebec. In March, 1888, the partnership was dissolved, Mr. Amyot continuing the business by himself under the name of the Dominion Corset Mfg. Co.

The decision to engage in the manufacture of the French style of corset was the occasion for a considerable expansion in the business. In March, 1889, an office was opened in Montreal, and in 1892 a warehouse was established in Toronto in the old Carlaw Building, which was destroyed in the fire of April, 1904.

In January, 1893, the company added a new department for the manufacture of their paper boxes. A separate factory was built for the purpose where, in addition to their

own requirements, they were soon filling orders for shoe and fur boxes to the number of 10,000 per day.

In January, 1894, Mr. Amyot formed a partnership with Mr. P. J. Coté, for the purpose of engaging in the brewing business. Construction work was started immediately, and on the 8th of May of the same year the firm made its first brew. Their initial capacity was sixty barrels a day, since increased by the erection of new buildings and the installation of more machinery to 150 barrels every twenty-four hours.

In 1897, Mr. Amyot bought the corset factory he is at present occupying, a splendid structure, 300 feet long by 39 feet wide, four stories high, the largest of its kind in Canada.

In spite of his many business ties, Mr. Amyot has always taken a deep interest in public affairs, and offers of both municipal and political honors have been literally showered upon him. The latter he has steadily refused to accept, while his record in the former consists of a two-year term as Mayor of Notre Dame de Quebec. For nearly two years he has been Vice-President of the Quebec Board of Trade. In 1902 he was instrumental in organizing the Quebec Branch of the Canadian Manufacturers' Association, of which he acted as Chairman till 1904, when he was made Provincial Vice-President.

It may be said without fear of exaggeration that Mr. Amyot is one of the ablest business men in Canada. From small beginnings, by sheer force of ability, he has rapidly plodded his way to the front until to-day he is recognized as one of the most prominent manufacturers of the Dominion. It may also be said that he is one of the most popular, a fact which is no doubt partly accounted for by his well-known ability as an entertainer. His untiring efforts on behalf of the visiting delegates to the Quebec Convention will long be remembered, particularly by those who accepted the warm hospitality of Mr. and Mrs. Amyot in their charming home on the St. Foye Road.

AMONG THE INDUSTRIES.

The Britannia Paper Company are at work on their new factory at Port Hope. They will spend \$50,000 in building and machinery, and employ fifty men.

The flour mill owned by Senator Perrier at Shediac, N.B., was destroyed by fire on November 10th, involving a loss of \$18,000.

The Newville Lumber Company are rebuilding their mill near Parrsboro', N.S., which was destroyed by fire a short time ago. The Robb Engineering Co., of Amherst, are installing the power plant.

The Thorold Foundry and Machine Co. have secured from Mr. O. Tanner, of Buffalo, the exclusive rights to manufacture in Canada certain patented specialties in the way of farm implements.

The New Brunswick Foundry, at Fredericton, have begun the manufacture of the Thessell weft-replenishing attachment for looms under arrangements with the patentee, Mr. F. P. Shaw, of the Shaw Machine Company, Lowell, Mass. This machine, which changes the shuttle automatically, without the stoppage of the loom on breakage or failure of the weft, is being much sought after, and will probably be adopted by the textile mills throughout Canada.

A ready-made clothing factory is soon to be started in Hamilton by Thornton & Douglas, of Stratford.

Staunton's, Limited, manufacturers of wallpaper, have taken out a permit for a one-story factory to be erected on Yonge St., Toronto, at a cost of \$30,000.

The McKinnon Dash & Metal Works Co. are offering to sell very cheap their vacant factory at St. Catharines. It has 35 h.p. water power, and is adapted for light manufacturing.

The McIntosh Brick Machine Co., of Goderich, have just completed the installation of one of their sand-cement pressed brick machines for the St. John's Brick Co., St. John's, Que., who expect to operate it steadily all winter.

The British North American Peat Fuel Company, Limited, has recently been incorporated in Manitoba. According to Mr. Duncan Sinclair, of Winnipeg, one of the directors, the head office and factory will be located in that city, and operations will be started some time next month.

Mining operations on Mackenzie, Mann & Co's. Atikokan range promise soon to be in full blast. Machinery to the value of \$15,000 is now being installed, and the sinking of shafts will be proceeded with without delay. A six-mile spur is being built from the C. N. R. to enable cars to run direct to the docks at Port Arthur.

The new opera house at Peterboro', Ont., has been equipped with wrought iron stairs on the outside walls of the building. These stairs will be used as exits after every performance in order to educate attendants in the use of them in the event of fire or other emergency. The contract for this work was awarded to The Geo. B. Meadows Toronto Wire, Iron & Brass Works, Co., Limited.

The oyster beds of Prince Edward Island are said to be about fished out. Many fishermen, who other years took between three and four barrels a day, have not averaged over half a barrel this year. Total prohibition for a few years is suggested as the only means of restoring the industry.

A match factory that will give employment to 100 hands and a rattan furniture factory are among the industrial probabilities to which the town of Sarnia is looking forward. The former will be operated by the Cleveland-Sarnia Saw Mills Company.

Last year the New England Fish Co. are said to have paid the C.P.R. for express alone on halibut shipments to the East over \$300,000. These fish were nearly all caught in Canadian waters, and constituted about half of the halibut catch of the whole Pacific Coast.

The Big Bend Lumber Co. have decided to make extensive additions to their mill at Arrowhead, B.C. New boilers and machinery will be installed to increase the capacity to 140,000 feet per day. It is expected that everything will be in readiness to resume operations by the 1st of March next.

The Thos. Davidson Manufacturing Co. are adding a four-story brick wing, 220 by 50 feet, and an engine-room, 45 by 50 feet, to their factory on Albert and Dominion Streets, Montreal. The output of their factory will be increased fully 25 per cent. when these improvements have been completed.

Messrs. Whalen & Bowman, of the Great Lakes Dredging Co., Port Arthur, will construct a dry dock and marine railway, together with foundry and machine shop, on one of the islands across the river from Fort William. In return for certain concessions from the municipality they agree to provide employment for one hundred men.

The Canadian Oil and Waste-saving Machine Co., Limited, has been incorporated at Brockville, Ont., with a capital of \$50,000 to manufacture machines for separating

and reclaiming oil waste and other substances. The directors are Messrs. H. Botsford, W. S. Buell and F. E. Clayes.

One of the largest Canadian banks, together with considerable United States capital, are said to be behind an enterprise looking to the establishment of immense car shops in Toronto. The company will be capitalized at \$5,000,000, and will work in close conjunction with the Canada Car Co., Montreal, who already have more orders than they can possibly fill in the next five years. If the plans carry through, employment will be furnished some 2,000 men.

By the spring of 1907 Montreal will have one of the biggest and most handsome hotels in America. It will be the present Windsor Hotel, greatly enlarged and greatly improved. The plans of a New York firm of architects, locally represented by Hutchinson & Wood, have been accepted, and building operations will begin early next year. The new structure will be eight stories high, and will contain 800 rooms, 450 of which will have baths.

The American Tobacco Co. has bought out the Imperial Cigarette Co., of St. John, N.B., and will probably close up the factory. The present manager of the cigarette company, Mr. Abraham Isaacs, will continue the manufacture of cigars on a somewhat larger scale, moving into new premises on the first of the year.

Another important concern has been added to the list of asbestos mining companies. This is the Asbestos Mining & Manufacturing Co., which has been formed by Providence, R. I., capitalists, and which will operate at Wolfstown in the Thetford, Que., district, the centre of the asbestos industry. The capacity of the plant at the start will be 150 tons of ore a day, but it is the intention to increase this subsequently to 300 tons. The buildings are being erected at the present time, and the plant is being furnished throughout by the Jenckes Machine Co., Limited, of Sherbrooke, Que.

The Granby Consolidated Mining, Smelting and Power Co., Grand Forks, B.C., recently placed orders for new machinery and equipment to the extent of \$100,000. A powerful ore crusher is being installed that is said to be the largest of its kind in use anywhere in America. It was made by the Jenckes Machine Co., Sherbrooke, and has a capacity of 150 tons of ore per hour. From the Canadian Westinghouse Co. they have purchased a 250 h.p. electric motor, with accessories, which will be used in lifting heavy loads from a depth of 1,000 feet.

The Dodge Manufacturing Co., of Toronto, have just completed the erection of a substantial brick power house, and augmented their steam plant by the addition of a further 300 horse-power in boiler capacity. The manager reports business as good.

The Keystone Sugar Company have let the contract for the erection of their new factory at Whitby, Ont. The price is said to be \$150,000. The old Warton plant will be dismantled, and its structural steel and machinery removed to Whitby. The contract calls for the completion of the buildings by August 15th, 1906.

The remarkable expansion in the business of the Bodes Gum Company, Montreal, has necessitated the erection of new quarters. They are now preparing plans for what will undoubtedly be one of the most up-to-date chewing gum factories on the continent. It will be five stories high, and its equipment will be thoroughly modern in every respect.

The ratepayers of Galt, Ont., by a vote of 896 to 62, have granted the Jackson Waggon Company exemption from taxes and a loan of \$12,000 as an inducement for them to establish works in that town. The company is at present doing business in St. George, Ont.

FOREIGN TRADE NOTES.

Rebate of Duties on Canadian Goods in South Africa.

For some time past South African importers have experienced considerable difficulty in obtaining a rebate of duty on the manufactures and productions of Canada when shipped via United States ports, which should, of course, be obtained under the preferential tariff now applicable to the Dominion. The circumstances have been carefully investigated by the Management Committee of the Cape Town Chamber of Commerce, and they have succeeded in making arrangements with the Controller of Customs, subject to the concurrence of the other South African Governments, that the rebate of duty on Canadian produce and manufactures, when shipped through other than Canadian ports, shall be made on production of the certificate of origin, and in addition (1) through bill of lading, or (2) a copy of the inland bill of lading from point of origin to port of export, certified by a proper authority, or (3) a stamped certificate from the Canadian Custom Department, giving the marks, numbers, etc., of the consignment.

Parcel Post Convention with Trinidad.

The announcement is made from Ottawa that a convention is now in force between the Post-office of Canada and the Post-office of Trinidad for the direct exchange of closed parcels by mail. The rate will be sixteen cents for each pound, or fraction thereof. Heretofore all parcels for Trinidad have had to go by way of England at a cost of thirty-four cents for the first pound and forty-two cents for two pounds. The Commercial Intelligence Committee of the Canadian Manufacturers' Association has for three years been urging the Post-office Department to effect some more satisfactory arrangement, and it will doubtless be gratifying to all past members of that committee to know that their efforts have at last met with success.

Formosa a Market for Pumps.

Pumps of a large capacity for low lifts, say under thirty feet, but chiefly ten feet, and requiring low power for run, especially those for kerosene engines, will, in the near future, find a market for irrigation purposes. They should, however, be simple in construction and easily handled. The extensive cultivation of rice and the great increase in the planting of the Lahanna sugar cane (i.e., rose bamboo, a Hawaiian cane introduced by the Formosan Government some years ago), both of which require abundant supplies of water, will probably tend to increase the demand for irrigation pumps. The contemplated establishment of a Government rice inspection office will also later on cause a demand for machinery to rake out dirt and paddy from the rice paddy sifting machinery.—*British Consul at Tainan.*

The South African Customs Union.

On December 1st North-western Rhodesia entered the South African Customs Union, with the same status as Basutoland and the Bechuanaland Protectorate. Goods of British origin, therefore, will now enjoy the same preference in this territory as they do in all the other States that are parties to the Union. It is announced that Articles 14 and 15 of the Customs Convention will apply to North-western Rhodesia. These articles contain technical provisions which were inserted to meet the requirements of Southern Rhodesia.

Commercial Travellers' Licenses.

New Zealand.—Foreign commercial travellers, on arrival in New Zealand and before beginning business, must register

with the Customs authorities. On leaving the country they must report to the Customs authority with whom they originally registered, and pay a tax of one-quarter of one per cent. on the gross value of orders taken. In calculating this tax the New Zealand officials estimate the profit on orders taken at five per cent., and upon this supposed profit they levy a tax of five per cent. Travellers soliciting orders from private individuals in their homes must also take out a trade license, costing from £1 to £2, the exact amount being based upon the size and importance of towns visited.

South Africa.—In the draft revenue license ordinance, just published by the Transvaal Government, the vexed question of a charge being levied on commercial travellers from the outside has been dealt with, says the *New York Commercial*. In the ordinance it is stipulated in connection with the item, "agent or representative of foreign firm," that this shall not include "a commercial traveller having no fixed place of business, who travels for orders and sells only from sample, and whose residence in this colony does not exceed six months at any one time." South Africa points out that under the terms of this clause practically all commercial travellers from the coast or from overseas can take orders all the year round without being subject to any contribution to the revenue, for the limit of six months will be easily overcome by their taking a short half-yearly holiday outside the Transvaal.

Fur Trade With Australia.

Owing to climatic conditions, fur garments are more worn in the State of Victoria than elsewhere in Australia. There is, therefore, a demand in Melbourne for high-class Canadian undressed furs, with the heads, legs and tails complete. A special enquiry has been forwarded to the Department of Trade and Commerce, Ottawa, on behalf of Melbourne wholesale buyers, which offers an exceptional opportunity for Canadian dealers in undressed furs to open up a valuable business connection. There is no customs duty on undressed furs. Orders will be supported by a letter of credit, so there is absolutely no element of risk to the sellers once the buyers are assured that the values and qualities can be depended upon.

With a view of assisting the increase of reciprocal trade between Canada and Australia, I shall, upon application, be pleased to forward to Canadian furriers particulars of the fur skins exported from this country to England and elsewhere. Such furs as Australian wallaby, opossum, omeo, kangaroo and the better class of rabbit skins should, if properly introduced, find an increasing sale in Canada, where there is a constant demand for fur garments in varied character and qualities.—*Canadian Commercial Agent, Melbourne.*

Wire Doors and Window Screens.

South Africa, owing to the fact that she has at certain seasons many insect pests, offers a peculiarly suitable market for the exploitation of wire window screens, (adjustable variety,) and wire screen doors. Neither of these articles have up to the present received the attention which the possibilities of the market deserve.—*Canadian Commercial Agent, Cape Town.*

Cotton and Banana Industries in Barbadoes.

The banana industry of Barbadoes has grown from 18 bunches shipped in 1902 to 15,326 bunches shipped in 1904, and it is estimated that at the present time there are about 100 acres of land planted in bananas, and that 40,000 bunches will be shipped during 1905. The difficulties in connection with the package and carriage of fruit appear to have been successfully overcome, and it has been estimated

that the industry should give a net return of £20 an acre per annum. The Cavendish or dwarf banana is the variety which can be shipped with the best results:

Like the banana industry, the cotton industry of the colony owes its existence to the incentive of the Imperial Commissioner of Agriculture. Some 1,647 acres are now under cotton, and with a co-operative factory in operation, the acreage promises to be largely increased. The average net return per acre in 1904 is put at £10 8s. 4d., not much more than half that from bananas, but satisfactory to the planters—*Commercial Intelligence*.

Jamaica Ripe for Annexation.

To the members of the Canadian Manufacturers' Association:—

Knowing the lively interest which your Association takes in the trade conditions of foreign countries, I am inclined to write to you regarding the progress of matters commercial in the island of Jamaica. I have been here for over three weeks prosecuting trade and have come in contact with many possibilities of analyzing the feeling of reciprocity with Canada, and beg permission to either widen or confirm your present knowledge of matters which may be of interest to you.

The United States has done and is doing wonders for Jamaica; much more than the mother country or the colonies have done. The almost daily service of ships of large tonnage between Jamaica and United States ports, in pursuance of the fruit industry, has developed the United States market for commodities which are necessary imports into the island. Jamaica is peculiarly dependent upon interior countries for almost all of her consumption, having no factories and in a large degree growing only market produce.

A brisk trade seems to be going on in Jamaica in retail stores and this trade looks to me to be very continuous and successful. The linen and dry goods, of course, are bought largely from England, but the food-stuffs are drawn from the American continent.

There is a strong and insular feeling towards things British, and this prompts me to believe that Canada could do much more than she does in meeting the demand. The island is not in any sense "drummed to death" as is Habana, and the ports are more accessible to New York.

There is quite a strong desire that the United States might be prevailed upon to establish factories and finance progressive schemes; in fact, many business men are not slow in declaring that it would be a happy thing if Jamaica were merged into the American confederacy. A moment's thought, however, will determine that this can never be, when the Panama Canal is considered and also the immense importance of Jamaica in her strategic position as virtually controlling the seas east of the proposed waterway. It is not England's policy to give up what she holds, especially a possession so important geographically. On the other hand the United States people can scarcely be expected to invest heavily in a foreign land without the protection of their own Government. The logical conclusion is, therefore, that Canada should have her attention drawn to the immense possibilities of commercial kinship with Jamaica. Only four days removed from American ports, Jamaica is not so far from the Canadian distributing centres as is the Pacific province of British Columbia.

When an island as large as Jamaica has no factories, why cannot Canada provide them? When America can find

ready sale for her commodities, why cannot Canada exploit her productions with equal profit?

Both Jamaica and Bermuda are feeling the loss of the withdrawal of the English troops. It naturally makes them feel more insular and dependent upon the friendship and good-will of their nearest kinsfolk. Canada has wealth. Jamaica has not. Canada has commercial enterprise enough to be a veritable godfather to Jamaica, if her financiers were only alive to the great field for the necessities and the common things of life. Agriculturally there could not be a richer land. The greater portion of her acreage is undeveloped. Labor is much cheaper than it is in Canada and the native population is vastly superior in intelligence and education to any other colored race that I have ever met with. The climate is gloriously beautiful.

What then remains necessary? Only a prompt and fair investigation into the claims of the island and the hand of progress stretched over the seas from her sister colony Canada.

Yours very truly,

A Canadian Abroad.

TRADE ENQUIRIES.

NOTE.—For further information regarding any enquiry mentioned under this heading or the names of enquirers, apply by number to the Secretary, at Toronto.

131—**AGENCIES, London.**—A company in London, England, has forwarded a number of small booklets, "Concerning Ourselves." The object of the booklets is to secure the agencies of Canadian firms in hardware and allied trades. They state that they have a connection with the leading firms; a show room and warehouse centrally located in London; carry on their business on a commission basis, and that they will not act as representative for more than one firm in a single line of manufacture.

132 **Binder Twine and Agricultural Implements**—A correspondent in Braila, Roumania, advises that there is a large consumption of binder twine, and a considerable demand for agricultural machinery in his market, and solicits correspondence with Canadian firms.

133 **Boards, Pine Floor**—A Lancashire, England, sawmill firm now obtaining supplies from the Baltic would welcome quotations from Canadian lumber mill owners for pine floor boards, free from knots, in lengths from 9 ft. to 25 ft.

134 **Boots and Shoes, Perfumery, Electro Plated Goods, Cutlery, Lamp Chimneys, Glass Tumblers, Earthenware, Butter, Cheese, Hams, and Bacon, Whisky and Malt.**—A manufacturers' representative in Grenada, B. W. I., who handles agencies for the West Indies Islands and British Guiana, desires to make arrangements with Canadian shippers in the above lines to sell their goods on commission, payments to be sight draft 30 or 60 days or other satisfactory arrangements. Prices are asked for f.o.b. port.

135 **Casein.**—A manufacturers' agent in Leith, England, asks to be put in touch with Canadian manufacturers of the above.

136 **Chair Seats, Legs and Spindles (Birch).**—A Lancashire, England, firm of furniture manufacturers would be glad to get prices and description of the above from Canadian makers of the same.

- 137 **Cheese, Butter, Eggs, Etc.**—A large South African produce importing company is open to purchase Canadian Cheddar cheese (in loaves of about 10 pounds each), butter, eggs, etc.
- 138 **Fibre, Indurated.**—Enquiry is made from England for Canadian manufacturers of indurated fibre or papier mache.
- 139 **Fillers, Eggs.**—Enquiry has been made from England for the addresses of Canadian manufacturers of cardboard partitions for egg cases, size about one foot square, with spaces for thirty-six.
- 140 **Flour, Corn.**—A Manchester, England, correspondent asks for the names of manufacturers of corn flour for sizing and manufacturing purposes. Large quantities are now imported from the United States.
- 141 **Flour, Wheat.**—A wholesale commission merchant in Copenhagen, Denmark, who already represents first-class Colonial houses and forwards English references, desires correspondence with Canadian shippers of the above.
- 142 **Frames, Mattress.**—A New York export commission house desires to locate a factory in Canada prepared to supply a large demand for special mattress frames for the South African market. Cash transactions.
- 143 **Fruit and Vegetables.**—A company in London, England, carrying on the business of produce agents, desire to represent Canadian packers of fruit and vegetables, or Canadian produce generally.
- 144 **Furniture (a)**—A Birmingham, England, correspondent intimates that he is advantageously situated to represent Canadian furniture manufacturers. He has been established eleven years, and has a permanent show room in Birmingham with a staff of travellers covering Midlands and northern countries. He offers to supply references.
- 145 (b).—We are in receipt of an urgent request from South Africa for catalogues of Canadian furniture manufacturers in a position to do business in South Africa.
- 146 **Furniture and Dry Goods.**—A Brussels, Belgium, correspondent asks to have his name put before Canadian shippers of the above lines. His business is the representation of firms in Europe on a strictly commission basis.
- 147 **Handles, Spade, Shovel, Manure and Hay Fork.**—A company in Tralee, Ireland, asks for quotations on:
 300 dozen 4'6" x 1 5/8" spade handles with 10" square end.
 200 dozen 5'0" x 1 5/8" shovel handles, all round.
 also for 4' x 1 1/2" manure fork handles, bent.
 4', 4 1/2' and 5' x 1 3/8" straight hay fork handles.
 Delivery in January, f.o.b., Liverpool.
- 148 **Handles, Spade, Pick, Etc.**—A Lancashire, England, firm handling large quantities of spade, pick and other wood handles, would like to hear from Canadian manufacturers who can fill orders.
- 149 **Handles and Washboards.**—A correspondent in Capetown, South Africa, with offices also at Durham and Johannesburg has forwarded samples to the Association of handles and washboards of the following specifications:
 Hammer handles—These are stocked in 14, 16, 18, 20, 22, 24 and 30". The best sellers being 14, 16 and 30".
 Pick handles—in one size, 36".
 Axe handles, also 36".
 Hatchet handles, 16".
 Spruce broom handles, 50" x 1 1/8".
 Wood washboards—23 x 12 1/2", overall.
- 150 **Hardware (domestic).** Towel Rollers, Rolling-pins, Pastry-boards, Chopping-boards—Enquiry has been made from England for Canadian makers of the above.
- 151 **Lumber and Woodworking Machinery.**—A contractor in Dominica, B. W. I., wishes to purchase, for cash, dressed and undressed white pine, pitch pine and spruce lumber, and also woodworking machinery. He asks for quotations, f.o.b. port and forwards two references.
- 152 **Machinery, Special.**—A correspondent in Duluth, Minn., who holds patent rights for multiple machines for moulding hollow concrete building blocks, desires to get in touch with Canadian machinery manufacturers prepared to manufacture such articles.
- 153 **Naphtha and Creosote.**—A Lancashire, England, firm of oil importers now obtaining their supplies from the United States, would welcome quotations for the above from Canadian producers.
- 154 **Oats.**—An important firm in Kingston, Jamaica, advises us that a good opening exists for Canadian oats, provided regular supplies can be secured.
- 155 **Paper.**—A company in London, England, interested chiefly in paper and allied business, and handling large quantities of news in sheets and reels, wishes to receive samples and prices from Canadian firms. They are open to make arrangements and give as a reference their bankers.
- 156 **Plows and other Agricultural Implements, Garden Spades, Pumps, Sewing Machines, Nuts, Bolts and General Hardware.**—A correspondent in Auckland, N. Z., carrying on an agency business, is prepared to handle agencies in any or all of the above lines and solicits correspondence.
- 157 **Pork, Cheese and Butter.**—A South African commission merchant with offices in Durban, Natal and Capetown, desires to communicate with Canadian shippers of the above.
- 158 **Pumps, Centrifugal.**—We are in receipt of an English enquiry for high lift centrifugal pumps. High class pumps are desired that will deal with heads of anything up to 1700 to 1800 feet. The house enquiring has Canadian connections and is quite reliable.
- 159 **Rims, Wood.**—A company in London, England, have enquired for the addresses of Canadian manufacturers of wood rims for bicycle tires of single tube and wire-on types. They are in a position to handle regular supplies.
- 160 **Shoes, Machine-made, Horse and Mule.**—A South African commission agent desires to represent a Canadian manufacturer of the above.
- 161 **Skates.**—A Melbourne, Australia, hardware and sporting supplies firm requests catalogues, lowest wholesale export prices, f.o.b. New York, and full particulars of the

most popular makes of Canadian ice skates. Payment can be arranged in Canada against shipping documents. Should manufacturers desire to send samples of leading lines by parcel post, via Vancouver, account sales will be rendered or they will be returned. A cable code word for each design, plain and plated, is suggested in reply to this enquiry.

- 162 **Soup, (Tomato) Preserved Fruits.**—A London, England, firm of good standing desires to be placed in touch with a Canadian house packing tomato soup, etc., preserved fruits in glass and tins, not directly represented in the United Kingdom.
- 163 **Spokes and Hubs.**—A Manchester, England, manufacturer of carriage and cart wheels wishes to obtain prices and description of spokes and hubs from Canadian shippers of the same.
- 164 **Supplies, Engineers'.**—A Melbourne, Australia, company with branches throughout Australia, making a specialty of engineers' supplies, desires to receive catalogues, small samples and lowest wholesale prices f.o.b. New York, for Canadian asbestos goods of every description.
- 165 **Trunks, Boots and Shoes, Gents' Furnishings, Travelers' Supplies and Wood Pulp.**—The head of a responsible firm of commission agents in Mexico City wishes to extend his connections with Canada, and is desirous of receiving communications from shippers of the above lines. He is particularly interested in procuring shoes for army use.
- 166 **Veneers, Slippers.**—A correspondent in London, England, carrying on a wholesale commission agency, for the past 20 years, and giving a Canadian reference, desires to get in touch with shippers of veneer and also manufacturers of slippers in felt, leather and canvas.

The Canadian Corundum Wheel Co.

HAMILTON LIMITED CANADA

MANUFACTURERS OF

Emery, Corundum and Adamite Wheels, made by Vitriified Elastic and Silicate Processes

ONLY MANUFACTURERS OF VITRIFIED WHEELS IN CANADA

Buy Canadian Made Wheels

Are You Looking For A Location ?

I have for sale, in a town near Montreal, a partially constructed manufacturing plant which will be sold at a very low price if taken at once. The town will give a liberal cash bonus, free water power and exemption from all taxation. Good shipping facilities. This is an exceptionally fine location.

Address—

E. A. DUKE, Sherbrooke, Que.

Cable Address "Therson" Toronto

Telephone Main 2863

THOMSON, TILLEY & JOHNSTON

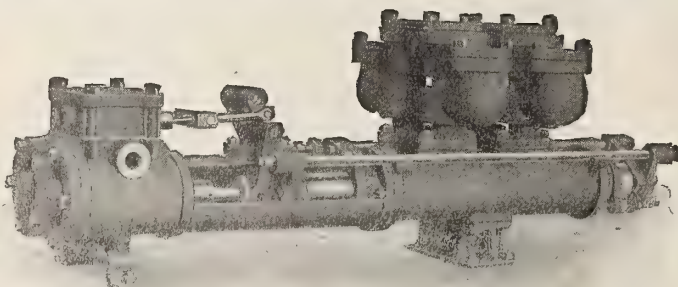
BARRISTERS, SOLICITORS, &c.

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SOLICITORS FOR THE CANADIAN MANUFACTURERS' ASSOCIATION

Offices—Toronto General Trusts Building
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TORONTO,
Canada

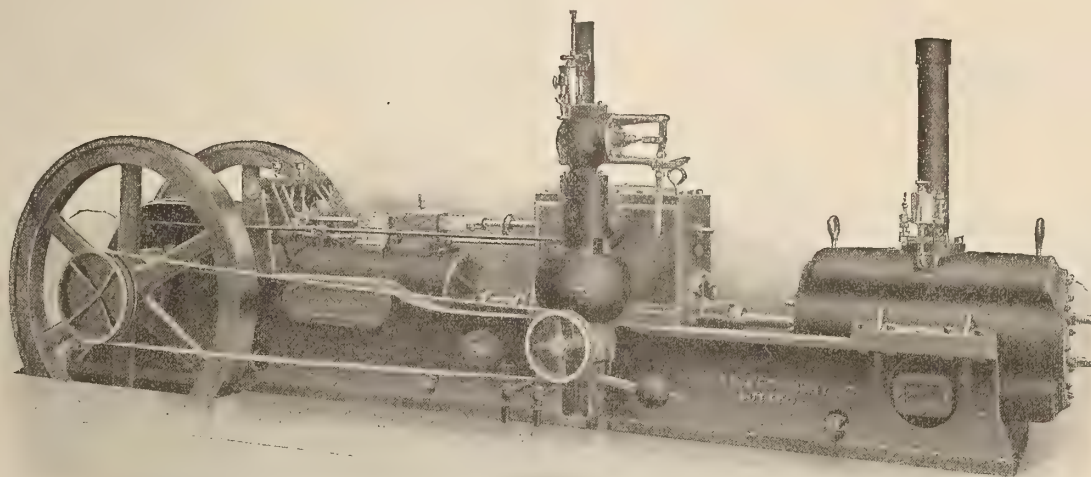


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Smart-Turner Machine Co.
Limited.
Hamilton, Canada.

Steam and Power Pumps,
Condenser and Travelling
Cranes, etc.

We have Several Bargains in Second Hand Pumps.

CANADA AIR COMPRESSORS



Steam, Belt or Power Drive.
Self-Contained.
Self-Oiling.

Straight Line or Duplex Type.
Any Pressure.
Any Capacity.

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CANADA FOUNDRY COMPANY, LIMITED

Head Office and Works: TORONTO, ONTARIO

District Offices: MONTREAL, HALIFAX, OTTAWA, WINNIPEG,
VANCOUVER AND ROSSLAND

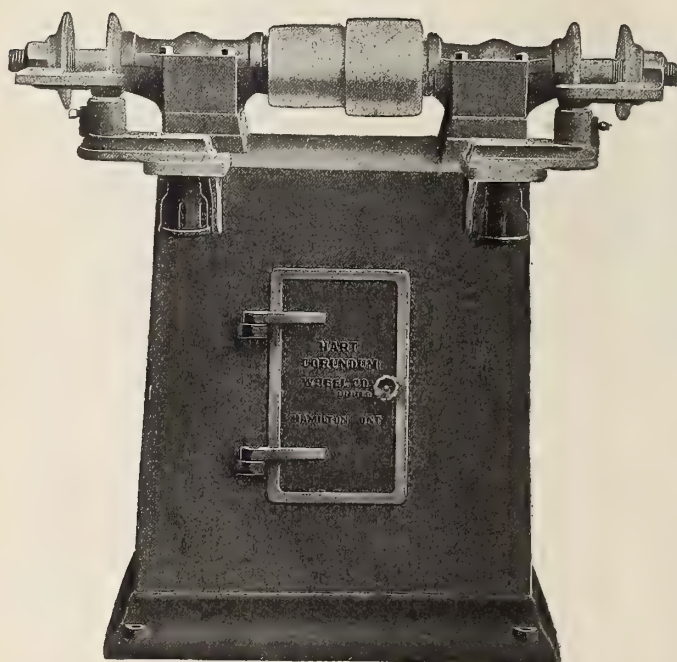
HART CORUNDUM WHEEL CO.

LIMITED

HAMILTON = CANADA



The Old Reliable



CYCLONE GRINDER No. 17

Cyclone Grinder No. 17

Built on Scientific Principles, Bearings absolutely DUST PROOF, Automatic Oilers, o carry 2 wheels 12 to 16 in. in diameter 3 in. thick.

Length of crucible steel arbor	-	42 inches
Distance between wheels	-	30 "
Diameter of arbor between collars	-	1½ "
Size of bearings	-	8 x 1-9/16 "
Size of cone pulley on arbor 5 and 6	x	4½ "
Diameter of collars	-	6 "
Height from floor to centre of arbor	-	35 "
Size of base	-	23 x 27 "

Countershaft has cone pulleys 15 x 16 x 4½ inches face

Tight and loose pulley, 8 in. diameter, 5 in. face, and should run about 650 revs. per minute.

Our Pure Crystal Corundum Saw Gummers have no equal for their Rapid, Cool, Cutting Properties.

Read the following from Bulletin 180 of the United States Geological Survey:

"Often a distinction is made between emery and corundum, many persons not recognizing emery as a variety of corundum. Emery is a mechanical admixture of corundum and magnetite or hematite. It is, of course, the presence of corundum in the emery that gives to it its abrasive qualities and makes it of commercial value, and the abrasive efficiency of emeries varies according to the percentage of corundum they contain."

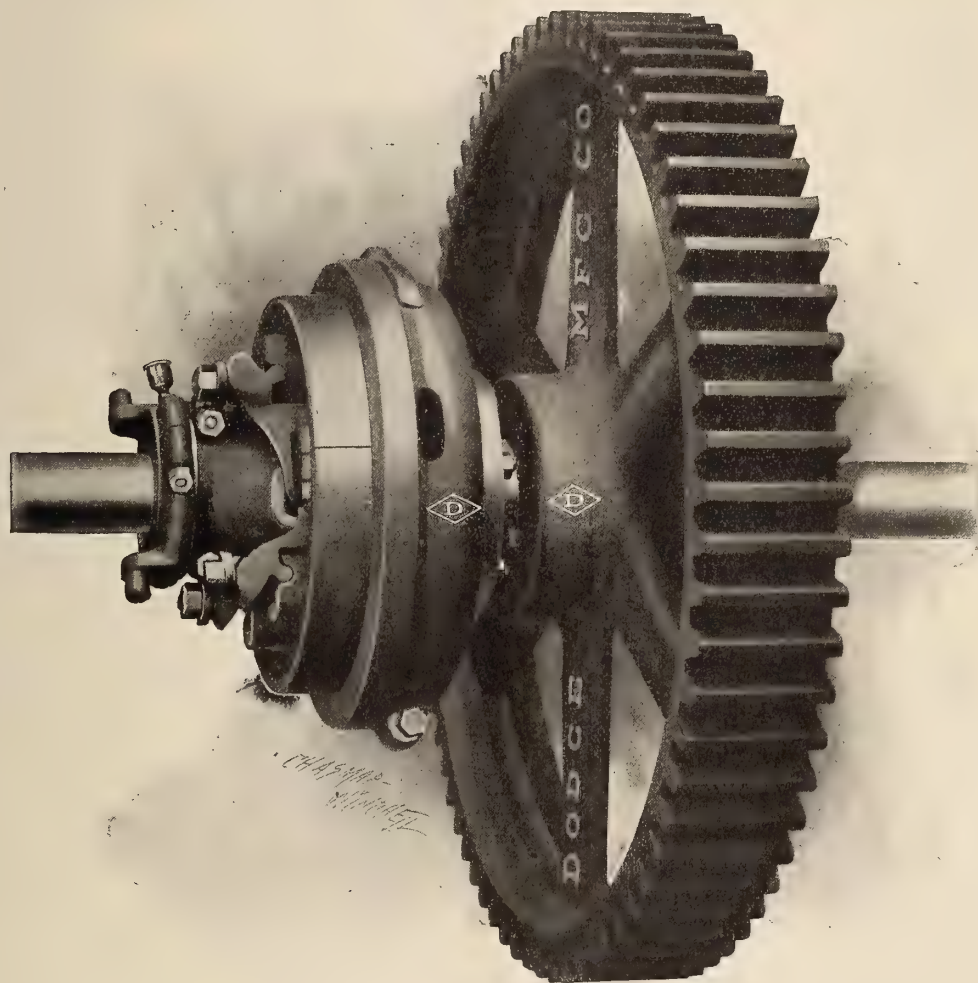
Emery is imported, mined by Greeks and Turks, and contains only about 25 per cent. corundum. Our Crystal Corundum is guaranteed to be 98 per cent. pure alumina, a Canadian product, mined and manufactured by Canadians for Canadians.

Write for Catalogue.

Prices on application.

SHAFTING EQUIPMENTS FOR MILLS AND FACTORIES

Most Complete Range of Patterns in Canada



DODGE SPLIT FRICTION CLUTCH

Mechanism and Extension Sleeve with Spur Gear.

Plans and Specifications for Complete Equipments of
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DODGE MANUFACTURING COMPANY

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**SADLER &
HAWORTH**

"CROWN BRAND" LACE LEATHER
will be found perfect and satisfactory
in every particular.

**LEATHER
BELTING**

100-20-100 **MONTREAL**

TO THE VARNISH BUYER

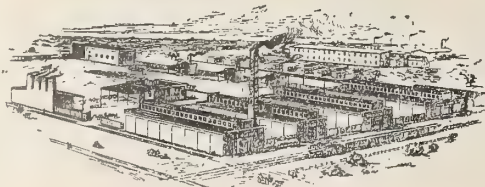
the most serious considerations are quality, reliability and uniformity, and these qualifications are of special importance to the dealer who is trying to build up a permanent varnish trade.

Berry Brothers' label or brand may be safely relied upon as ensuring the above conditions.

Our varnishes are the safest goods to handle and the surest and most reliable goods to use.

Write for 100 page Illustrated Catalogue.

Every dealer should have a Copy for Reference



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LIMITED.
VARNISH MANUFACTURERS

WALKERVILLE, - - - ONT.

Export Orders
Filled
with Despatch



Cable Address
"Pure"
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WE ARE NOW IN A POSITION TO FILL ORDERS FOR
OUR MINERAL AND VEGETABLE PIGMENTS AND DRY
COLORS, ALSO FLEXIBLE PASTE COLORS PRODUCED
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WE GUARANTEE THESE COLORS TO HAVE A PER-
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THING HERETOFORE MADE.

SAMPLES AND QUOTATIONS CHEERFULLY FUR-
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Office and Works **Limited**

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Cable "Campbell"

HEADQUARTERS FOR GREASES

We Manufacture greases of all descriptions for every known purpose



Cup and Motor Greases
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Harness Oil
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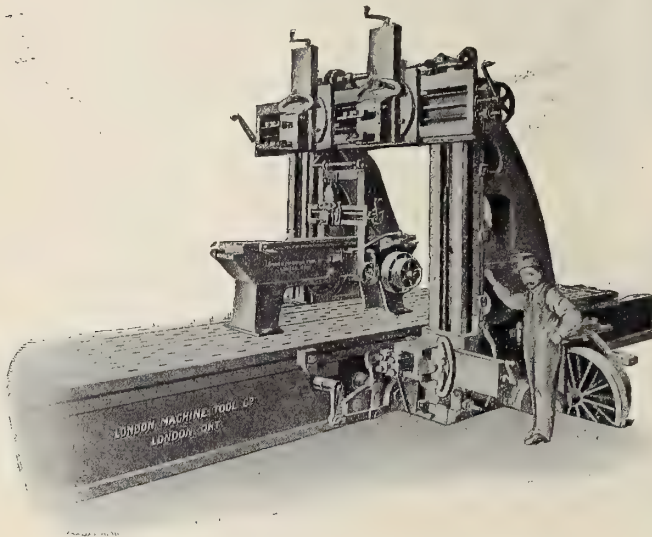
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LONDON MACHINE TOOL CO.

London, Canada

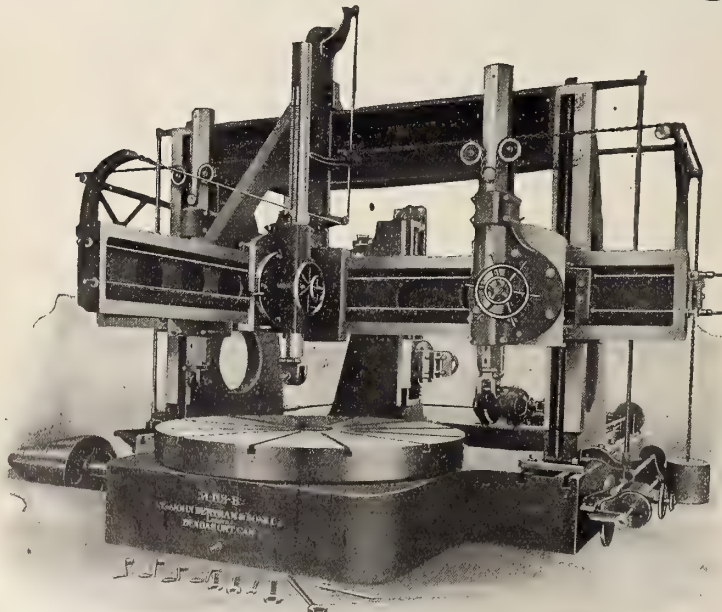
Manufacturers of High Grade Machine Tools



72 x 72 x 25 ft. Planer. Weight 120,000 lbs.

Lathes Planers
Horizontal Boring Mills
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Bertram 12-16 ft. Boring and Turning Mill



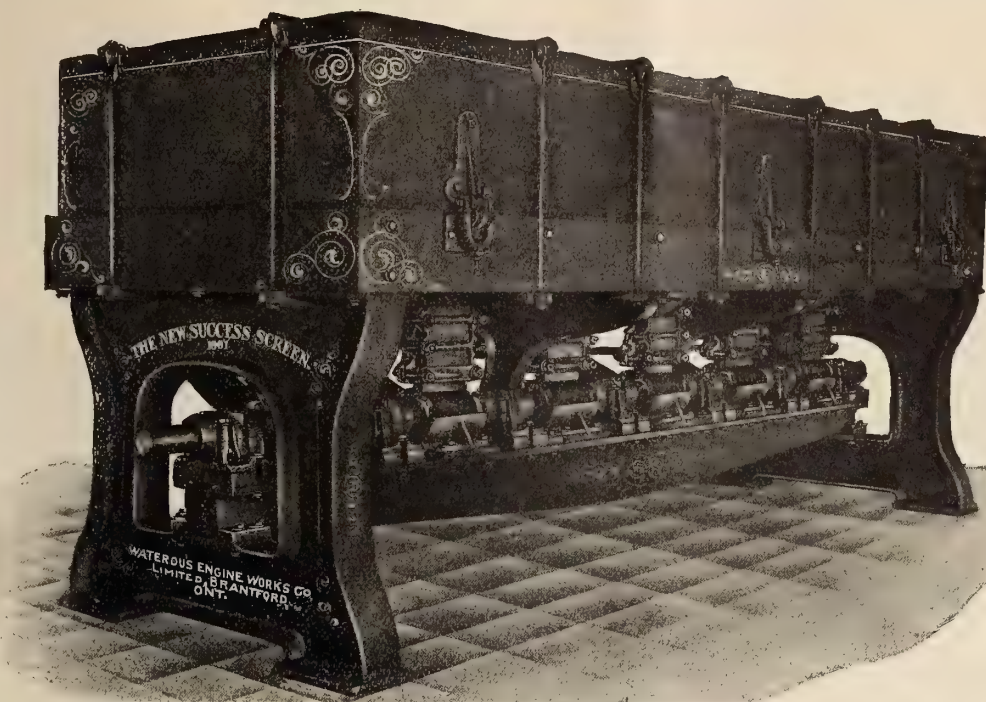
WITH rear housing and front extension arm, especially designed for turning and boring large diameters. As shown in the illustration this machine admits 12 feet 4 inches between housings, 6 feet 10 inches under tool holders and 7 feet 4 inches under crossrail, has two turning tools on crossrail, one boring and turning tool on the extended arm and a fourth tool on the back housing. The rear housing is adjusted by power in and out, so that diameters from 16 feet down to 12 feet may be turned. The tool-slide has a vertical feed by power and quick hand adjustment. The housings are moved by power, an auxiliary motor being provided for this purpose and also for elevating the crossrail.

PHOTOS AND PARTICULARS OF THIS OR ANY OF OUR MACHINE TOOLS WILL BE SENT ON REQUEST.

The JOHN BERTRAM & SONS CO., Limited
DUNDAS - Ontario, Canada

The Waterous Engine Works Co., Limited

BRANTFORD—CANADA



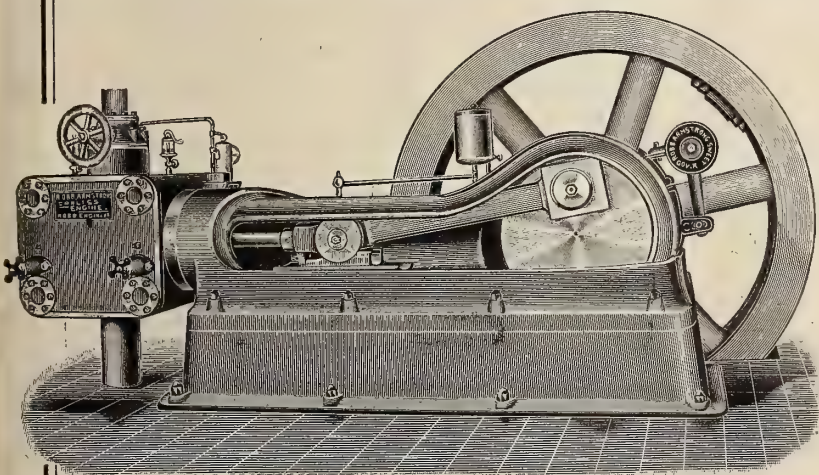
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We Make—

“SUCCESS” SCREENS
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SPECIAL CUTTING-OFF
RIGS

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Our Special Catalog -
will give full inform-
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A Fine Steam Plant



“I will say without qualification that it is as fine a boiler and engine plant as I have ever had the pleasure of seeing for its size. The engine was working without heating and absolutely without any noise. I wish to congratulate you on your success in building this class of engine, and hope that we may have pleasure in dealing with you again.”

The above refers to a 350 horse power Robb-Armstrong Corliss engine and two 175 horse power Robb-Mumford boilers installed by us.

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AGENTS—Wm. McKay, 320 Ossington Avenue, TORONTO.

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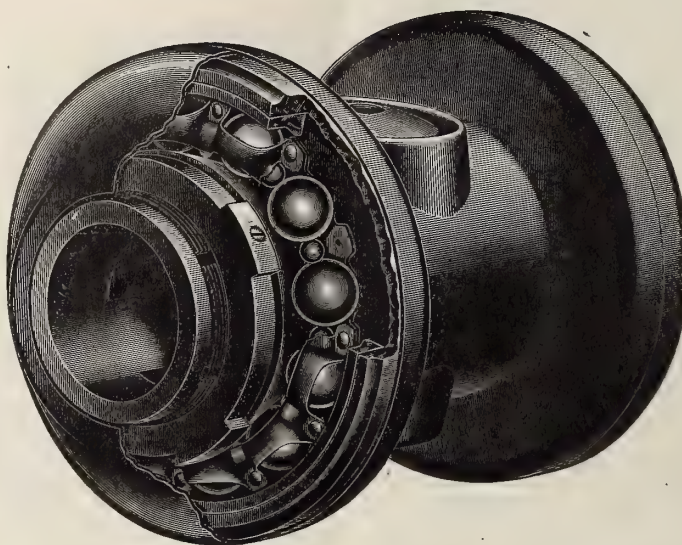
100 PLANTS EQUIPPED IN CANADA

A Bearing
Simple in Construction
and
Practical in Operation

"As near as we can estimate there is, we should think, at least fifty per cent. saving in power with the Chapman bearings.

"ALABASTINE Co., LTD.,
"Paris, Ont."

Durability and
Economy of Operation
Secure its Adoption



A Bearing having the
Highest Known
Efficiency
as a Power Saver

"We are of the opinion, in our case, that we save at least twenty per cent. in power with the Chapman Double Ball Bearing, and we also find a great saving in oil. The bearings are also clean; we have no oil running down hangers, posts, etc.

Yours truly,
McLAUGHLIN CARRIAGE
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We Guarantee You
a Saving
of 75 per cent.
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Write the Penberthy,
You will always find our brasses
Fully guaranteed.

Do not drift around
Or you may run aground,
But buy our line of goods.
The best that can be found.

Our Automatic Injector,
Is the world renowned,
And like our Sultan Oiler,
Is made both good and sound.

We cannot tell you more,
For others might get sore,
So just take our advice,
And ask of us the price.

ASK YOUR NEAREST JOBBER

Where Buffalo Goods are Made in Canada

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Hand and Power Blowers
 ∴ Portable and Stationary
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CATALOGUES APPLYING TO ANY SUBJECT WILL BE SENT ON APPLICATION.

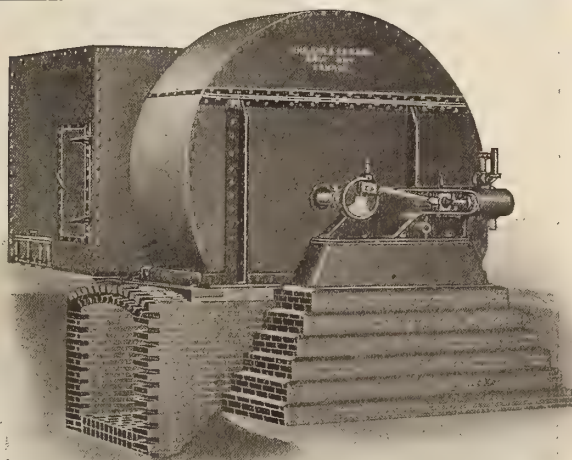
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MONTREAL, QUE.

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Hot Blast
 Heating Systems
 for
 Schools, Colleges,
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Mechanical Draft
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 of all kinds and for all
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PLANS AND ESTIMATES FURNISHED ON REQUEST

NOW IS THE TIME TO ORDER

**OAR LOCKS, RUDDER HOOKS,
BOAT KNEES, MILK CAN
HANDLES AND KETTLE EARS**

WE HAVE THEM

McKinnon Dash & Metal Works Co.
ST. CATHARINES, ONT.

We also have a vacant Factory For Sale in St. Catharines with 35 H. P. Water Power which we will sell cheap. Write for particulars.

**WE ARE
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The GEO. B. MEADOWS TORONTO WIRE, IRON & BRASS WORKS CO., Limited.

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THE STEEL RAIL MILL OF

The Algoma Steel Co., Limited, Sault Ste. Marie, Ont.

IS NOW IN OPERATION AND TURNING OUT

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STANDARD
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Steel Rails

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Your Specification will have our best attention

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FOR STEAM, HEAT AND COLD WATER PIPES,
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MICA BOILER COVERING COMPANY, Limited

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Awards at { Paris Exposition, 1900; Pan-American Exposition
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WIRE ROPE



ALL KINDS AND SIZES AND FOR
ALL PURPOSES

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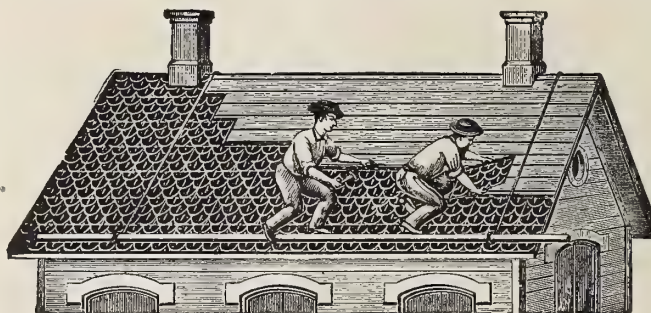
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THE B. GREENING WIRE CO., Limited
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Pedlar's Steel Siding and Shingles

At \$2.00 and \$2.55



per 100 Square Feet

Painted red on both sides. Most durable and economical covering for Roofing or Siding for Residences, Houses, Barns, Elevators, Stores, Churches, Poultry Houses, Cribs, etc. Easier to lay and will last longer than any other covering. Cheaper than wood shingles or slate. No experience necessary. A hammer and snips are the only tools required. It is semi-hardened high grade steel. Brick or Stone Siding at \$2.00 per 100 Square Feet. Pedlar's Patent Steel Shingles at \$2.55 per 100 Square Feet. Also Corrugated Iron, Painted or Galvanized, in sheets 96 inches long. Beaded and Embossed Ceilings. V. Crimped Roofing. 2,000 designs of Roofing, Siding and Ceilings in all grades. Thousands of buildings throughout the Dominion covered with our Sheet Metal Goods, making them

FIRE, WATER AND LIGHTNING PROOF.

Send in your order for as many squares (10 x 10 feet) as you may require to cover your new or old building. The very best roofing for this climate. We can supply Eave Trough, all sizes, Corrugated or Plain Round, Conductor Pipes, Shoes, Elbows, Spikes, Tubes.

All goods shipped day after order is received. We are the largest concern of the kind under the British flag. Established 1861. Capital invested \$150,000.00.

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Standard Fire Bucket Tanks



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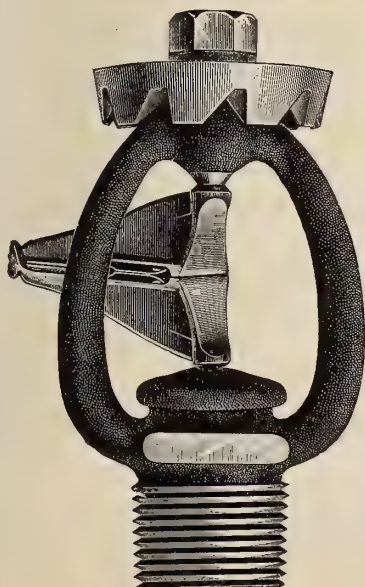
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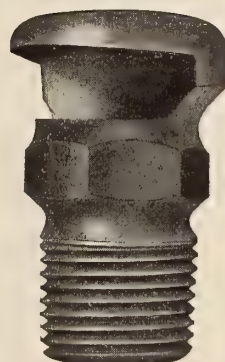


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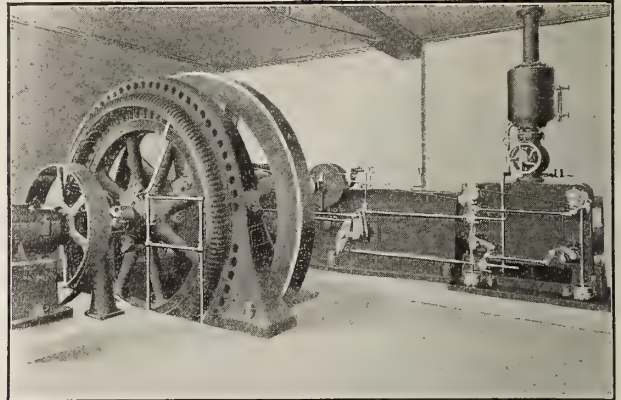
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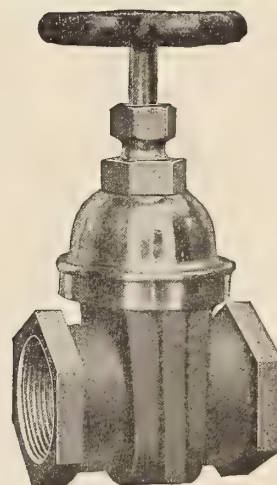
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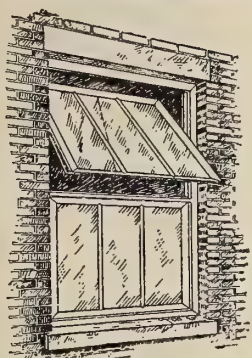
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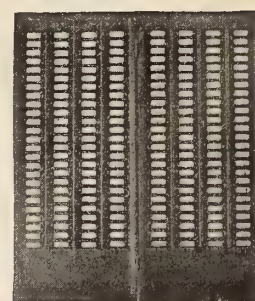
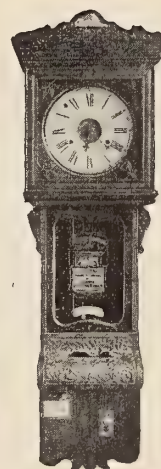
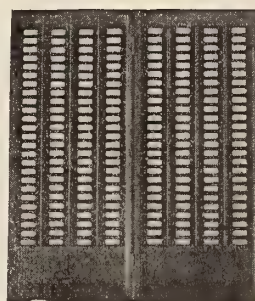


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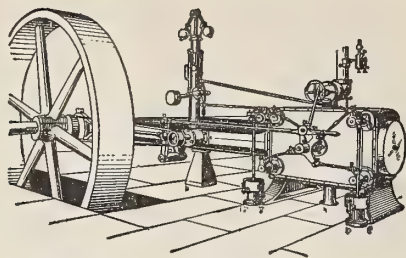
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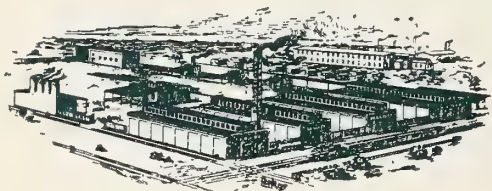
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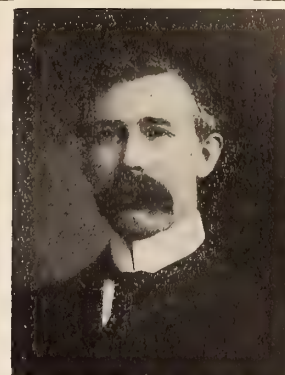
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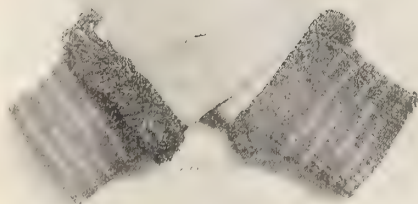
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No. 6.

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WHAT PROTECTION DOES FOR THE FARMER.

THOSE who argue that protection is no good for the farmer, that the value of his home market is a myth, would do well to read what the sugar beet growers had to say to the Tariff Commission in Berlin. A full report of the presentation of their case appears upon another page in this issue, and will repay careful study.

The beet growers ridicule the evidence submitted to the Commission at other places to the effect that farming to-day is unprofitable. The farmer may be, as he has been pictured, a man of severe toil and close economy, but the day of small returns for his labor has passed. Ever since the improvement of our transportation facilities and the distribution of industrial establishments throughout the country, giving rise in turn to local markets, the value of farm produce has steadily increased. It is well within the memory of many a man who is still young when 15 cents a dozen was a good price for winter eggs, when Christmas chickens sold for 25 to 30 cents a pair and turkeys for 6 cents a pound, when butter was plentiful at 12 to 15 cents a pound and good apples at \$1.50 a barrel. To-day the farmer will easily get double these prices in the open market, so that he has practically twice as much money as he had only a few years ago to spend on manufactured articles and articles of food which he does not produce himself.

But meanwhile the price of most kinds of manufactured goods has steadily fallen away, as a result of the introduction of labor saving machinery and the enlarged output of our factories. Furniture, stoves, kitchen utensils and a score of other articles found in every farmer's house can be bought to-day for half of what they cost twenty-five years ago. Similarly with agricultural implements. Self-binders were sold a quarter of a century ago for over \$400. They were as large as small threshing machines, and required four horses to draw them. The modern self-binder, made nowhere better than in Canada, costs \$125, is pulled easily by two horses, does three times the work of the old kind, lasts twice as long, and may be seen on almost every farm in the country.

In view of this double movement, the tendency for farm produce to increase in value and for manufactured goods to decrease, it would seem reasonable to infer that the purchasing power of what is produced on the farm has almost quadrupled in the last twenty-five years. What has brought about this satisfactory condition of affairs? Let the Waterloo farmer answer in his own words. "It is the growing population of these industrial towns prospering in our midst. These towns about us . . . are prospering to-day as they never did before, and with their increasing prosperity our local markets have substantially improved. . . . We feel convinced, through the development of our splendid local markets in this and other surrounding and industrious towns, that in like manner Canada's greatest prosperity is coming when the farm and manufactory join hands, grow up together, the one finding the food and the other finding the market."

TWO KINDS OF TARIFF AND WHAT THEY DO.

DEPUTATIONS of farmers and others have appeared before the Tariff Commission at a number of places, asking for a general levelling-down of the customs duties. While admitting the necessity of a tariff for revenue purposes they urge that it should be nothing more than a revenue tariff. A protective tariff, they claim, is too great a burden upon the consuming public, which is largely made up of the working classes.

A protective tariff is just as advantageous for the workingman as it is for the manufacturer. Perhaps this principle has never been more clearly or more forcibly stated than by the late President McKinley. Speaking to a Boston audience in 1891 he said:—

"A protective tariff, as an agent for raising revenue for"

the national treasury, is just as good as a revenue tariff, and in times past has been a more certain agent, so that a protective tariff in that particular does everything which a revenue tariff would do, and does more. While it raises all the needed revenue for public purposes, it encourages and builds up the industries of our own country, and protects our own labor and skill against the underpaid labor and skill of every other country of the world. A revenue tariff never built a factory in the United States. A revenue tariff never opened a mine in the United States. A revenue tariff never built a fire in a furnace in the United States, but it has more than once extinguished the fires which have been built in the furnaces under a protective tariff. It saps the foundations of national and individual prosperity. It increases the public revenue for a time, but does it by diminishing the wages of labor at home and by increasing production abroad for consumption at home. A revenue tariff levels down; a protective tariff levels up. A revenue tariff would cheapen products by cheapening men; a protective tariff would cheapen products by elevating men and getting from them their best skill, their best genius, their best invention.

"A revenue tariff encourages the foreign shop and the foreign laborer and discourages the domestic shop and the domestic laborer. For you must remember that a revenue tariff is for revenue, and revenue only, and you cannot have revenue in large volume unless you have large importations, and you cannot have large importations of competing foreign products without displacing to that extent domestic products. And, to the extent that you displace domestic products by foreign products, to that extent you displace American labor and diminish the demand for American workingmen in the United States. There comes a time when a revenue tariff fails to raise the needed revenue, because the people have grown too poor to send money abroad to buy, and then a revenue tariff fails. But a protective tariff never fails. We have in the last twenty-five years paid off \$174,000 every day of the public debt under the protective tariff, and we have reached the first rank in the world as a manufacturing, mining and agricultural nation. A revenue tariff takes our money, our manufactures and markets from us. A protective tariff keeps them at home.

"This policy of protection must be maintained and continued, because it represents to us the highest possible civilization and the best and noblest destiny. They talk about things being cheaper from the other side. There is nothing cheap from abroad to this people that means idleness among ourselves, and there is nothing cheap to the people of this country that permits to rest undeveloped in our hills the great, rich, raw material which God placed there, and there is nothing cheap enough in all Europe to buy the dignity and independence and glory of American manhood."

What protection can do for the United States it can do equally well for Canada. The measure of protection we now enjoy, imperfect as it is in many respects, has been productive of great results. According to the Illinois Manufacturers' Association, one hundred and twenty-two of the leading concerns of the United States have been obliged, chiefly on account of tariff restrictions, to establish branch plants in Canada, with a resulting gain to this country of upwards of \$50,000,000 in invested capital. In consequence of this movement there has been a greater demand amongst us for skilled labor, wages have appreciably increased, market produce of all kinds has advanced in value and the whole community has shared in the general prosperity.

These are conditions which should be encouraged. There is still plenty of room in Canada for the investment of

United States capital. We need money to develop our latent resources. We want more of their manufacturers to come over and produce in Canadian workshops, from Canadian material and with Canadian labor a portion of the \$166,000,000 worth of merchandise we purchase from them every year. The surest way to accomplish this is by raising the tariff against them. Make it unprofitable for them to continue manufacturing at home for the Canadian trade, and they will speedily establish more branch factories on this side of the border, thus adding to our population, furthering our industrial development and increasing our national wealth.

NATIONAL TECHNICAL SCHOOLS.

IN asking for a commission to investigate and report on the feasibility of a national system of technical schools, the Dominion Trades and Labor Congress and the Canadian Manufacturers' Association have not overlooked the constitutional difficulties presented by the British North America Act.

When this legislation was framed very different views were held regarding education from what are held to-day. Schools were supposed to exist mainly for the purpose of imparting culture. Beyond the primary grades they were little used except by people of some means, who had leisure to devote themselves to such studies as literature and the classics, history, mathematics, philosophy and the natural sciences. Utilitarian ideas had not yet begun to take shape. The few who ventured to advocate that more attention be paid to this feature were ridiculed. Manual training and the kindergarten were things of much later introduction. Technical schools there were none, so far as Canada was concerned, and even in England and on the continent where the movement for them was pioneered they had only begun to make their appearance.

It was therefore a somewhat narrow view of education that the Fathers of Confederation had in mind when they decided to delegate all jurisdiction in the matter to the provinces. They could not possibly foresee the tremendous revolution which was soon to take place in continental systems. Nor could they be expected to anticipate the vital influence which education, in some of its branches, was destined to exert on the country's trade and commerce. Had they been able to do so, the terms of the Act in this regard would undoubtedly have been modified in such a way as to allow for federal legislation on those questions which were found to be of national, rather than provincial importance.

And yet, notwithstanding these restrictions, the Dominion Government has seen fit to interest itself in the practical work of instruction in at least two departments. By establishing a system of experimental farms, it has recognized the importance of the agricultural industry as a factor in national prosperity, and has claimed the right to encourage its development along educative lines. Similarly by the establishment of military schools it has recognized the necessity of training up within our borders a corps of engineers who would be able to look after the country's interests in time of war.

But the development of our industrial interests in times of peace should have just as much claim upon the attention of the Federal Government as the protection of those interests in times of war. The wisdom of a liberal policy in this respect is illustrated by the unquestioned benefits which the experimental farms have been the means of conferring. The great army of workers in agricultural industries have thereby been equipped with a store of practical and scientific knowledge which has contributed very materially to their success. Conditions among this class of working people have been

greatly improved, our national wealth has been added to, and our trade with foreign countries has been stimulated and strengthened.

Meanwhile another great industry—manufacturing—has forged its way rapidly to the front, but by stress of foreign competition and the lack of skilled operators its growth is being retarded. It is crying out for assistance. Its workers are asking that they be given the same opportunities as are given the farmers to become skilled in the various departments of their work.

Surely what has been done for the one industry can be done for the other. The constitutional difficulties are no greater than they were, and the needs of the case are no less. Were the educational facilities that are asked for provided, it seems reasonable to suppose that the benefits to the country at large would be fully as great as those which followed from the establishment of experimental farms. On the other hand, if these facilities are not provided, Canada will always occupy the unenviable position of being dependent upon outside countries for her skilled help, and must inevitably fall far behind in the race for industrial supremacy.

SLAUGHTERING HOGS IN BOND.

THE privilege which Canadian packers have for some time enjoyed of slaughtering United States hogs in bond was recently cancelled by the Government, to take effect on January 1st. The condition out of which this privilege arose was a marked shortage in the supply of Canadian hogs. With the large and well equipped plants at their disposal, Canadian packers could easily handle 30,000 hogs a week, but under the stress of low prices the supply dropped down to 10,000, and for the past five months it has rarely exceeded that figure. To ensure these plants remunerative operation, and to provide their workers with steady employment the privilege referred to was accorded, and has proven itself an effective remedy for an awkward situation.

The reasons now advanced for cancelling the privilege are two: first, to protect the Canadian hog from disease; and second, to safeguard the reputation enjoyed by Canadian bacon in England. As regards the first, we must confess we are at a loss to understand how there can be any danger of contamination, for the bonded hogs are slaughtered within a week after their arrival in the country, and the only Canadian hogs which could possibly come in contact with them are those which are themselves about to be slaughtered. There can scarcely be any more danger from this practice than from that of shipping United States hogs through the country in bond, yet so far as we are aware, no word of protest has been heard on the latter score.

As to the desirability of protecting the splendid reputation enjoyed by Canadian bacon in England there can be no room for question. The packers have expressed their willingness to assist in that direction by branding every piece of United States bacon turned out of their factories. So far as the English commission house man or provision dealer is concerned such a precaution should be unnecessary, for the two brands are entirely different and as readily distinguishable as hay is from oats. But the individual consumer is not so well informed, and might easily be induced to accept for Canadian bacon anything which a dishonest dealer chose to offer him. This form of deception constitutes a perpetual menace to the reputation not only of Canadian bacon, but of Irish and Danish bacon as well. It makes no difference whether United States hogs are slaughtered in bond in Canada or not; the dishonest dealer will

always seek to profit by the substitution of inferior goods for those of better quality.

A third and more potent reason than either of these is said to have influenced the hog raisers in pressing their claims on the Government. They are afraid, it is said, that the price of Canadian hogs will fall if the practice is continued. In this connection they have complained of the instability of prices in Canada, stating that they can see no reason why the packers should not pay a flat rate the year round. If the packers sold the bulk of their product in the home market such a thing might be possible, but with 85 per cent. of their output being disposed of in England, market conditions in that country must necessarily determine the price to be paid for raw material in Canada.

The English market is supplied with four different grades of bacon: Irish, which is the best, at the rate of about 10,000 hogs per week; Danish, the second choice, at the rate of 30,000 to 35,000 a week; Canadian bacon, which stands third, represents a consumption of from 25,000 to 30,000 a week; while United States bacon, separated from all these in quality by a wide gulf, is marketed to the enormous extent of nearly 65,000 hogs a week. And yet this export of United States hogs is simply a safety valve as it were to maintain their home market. There is a certain quantity in that country to be got rid of every week, and England offers the most suitable dumping ground. If Canada can slaughter and cure a portion of that amount it means increased prosperity to her packers and more steady employment for the workers in that industry. Its product does not compete with Canadian bacon and can never reduce its price, for it is a totally different article, prepared to satisfy a totally different taste.

Prices might be injuriously affected, however, if Canadian plants are compelled to lie idle two or three days out of every week. The steadier their operation and the larger their output, the lower will be the proportion of fixed charges to be borne by each hog. If 10,000 hogs per week, the present supply, have to bear the fixed charges that should be distributed over 30,000 per week, the present capacity, the packer will surely retrench by reducing the price for raw material.

All things considered, the cancellation of this privilege seems hasty and ill-advised. We can heartily sympathize with the Canadian farmer in his desire to preserve an industry which has proved so profitable to him, yet he in turn should have enough confidence in the manufacturer who has done so much to build up the reputation of Canadian bacon in England to know that he will do nothing to jeopardize a business which it has taken him years to establish and in which he has millions of money invested.

POSTAGE ON BRITISH PERIODICALS.

FOR some time past the question of postal reform has been freely agitated in Great Britain, and it seems altogether likely that strong pressure will be brought to bear on the new ministry to amend the regulations so as to bring them more into conformity with popular ideas. Mr. Henniker Heaton has again come forward with his proposal for a universal penny postage convention and apparently has many supporters. Another suggestion has been made looking to the adoption of an international postage stamp. A movement is also on foot to remove the discrimination which prevails throughout the United Kingdom between the rates on daily and weekly newspapers on the one hand and monthly trade journals and magazines on the other.

Canadians, however, will be most interested in the agitation for the reduction of the rate on British magazines and periodicals to Canada. At the present time a rate of four pence, or eight cents per pound prevails from the United Kingdom, whereas the rate from the United States to Canada is only one-half cent per pound. In other words, the British magazine coming to Canada pays sixteen times as much postage as does the magazine from the United States.

This remarkable disparity in postage rates is said to explain the curious fact that English magazines and trade journals are seldom met with in this country, while United States publications pour in upon us each month in ever increasing volume. No doubt the excessive postal rates have militated very seriously against the English publisher, though even were the situation reversed there would still be a large consumption of United States literature in Canada by reason of a certain kinship of tastes and ideas. The English publisher therefore could never hope to drive the United States magazine out of the field, though he should be able to increase his sales very materially under a more reasonable rate of postage.

Canada would gladly welcome a larger number of British publications. Both from a commercial and an imperial standpoint we desire to become better acquainted with them. Our literary appetites have been fed too long on one kind of diet. We have become surfeited with Yankee jingoism, and need a change to something more wholesome and substantial. Gladly, too, would we buy more of our imported goods from the Mother Land. At present we are sending enormous sums every year to mail order houses in the United States. Their attractive advertisements in the ten cent magazines are like magnets, drawing the money from our very pockets. There is no question but what a large percentage of this could be diverted into British channels were we but given an opportunity to become familiar with British goods through the medium of their magazine advertisements. The preference feeling is strong in Canada, and it would seem a pity if such a trifling matter as postal rates were to prevent Great Britain from taking due advantage of it.

There is every likelihood that this matter will form the subject of a strong resolution at the Sixth Congress of Chambers of Commerce of the Empire, to be held in London next July, and while it would hardly be fitting for Canada to interfere in a matter which is essentially one of administration on the part of the British Government, it might not be out of place for us to express our sympathy with the British publisher, and to wish his efforts every success.

A RECORD, NOT A PROSPECTUS.

PERHAPS no more striking testimony could be had to the splendid work being done by the Canadian Manufacturers' Association than the remarkable growth which its membership has undergone in the past six years. A live organization, that is accomplishing results, will always find those results reflected in the numbers who come forward to take advantage of them. Measured by this test the success of the Association has been marked indeed.

In October, 1899, the Canadian Manufacturers' Association was little more than a name. As an organization it was almost entirely local, centering chiefly in Toronto and a few of the surrounding towns. Beyond the borders of the Province of Ontario it was practically unknown. Its members numbered only 132 all told.

To-day it has a membership of 1,975. From a local, or at most provincial, organization it has become national, representing every class of industry in the country, from the Atlantic to the Pacific, and with branch offices in five of our principal cities. In six years it has multiplied itself by 15; it has multiplied its paid staff by 10; it has multiplied its offices by 6; and has extended the sphere of its operations 1,000 miles to the East and 3,000 miles to the West.

And still it grows. A reference to the minutes of last month's meeting will show that forty new names were added to the roll in December. Corresponding increases have been reported for the months immediately preceding, and there is every indication that the present rate of progress will be sustained for some time to come.

But at this rate of progress, gratifying as it is in many respects, the Association will fall short of accomplishing the object with which it set out at the beginning of its financial year. That object was to add 1,000 new names to the roll before August 1st, 1906. A rather difficult task, it may be said, and yet, considering the large number of small manufacturers still outside of the Association, who are every day sharing in the results of its work, it should not be so difficult as would seem at first thought.

All that is required is a little more personal effort on the part of those who are already enjoying the benefits of membership. The advantages which the Association has to offer should be given the widest possible publicity. The man who has profited by the work of the Insurance Department should let his brother manufacturer know about it. The shipper who has had his freight troubles adjusted should encourage his business friends to apply to the same department for relief. If manufacturing interests have been safeguarded, either at the local legislatures or at Ottawa, it has been because of the Association's splendid organization. It means dollars in the pocket of every manufacturer to have that organization maintained; it means more dollars to have it strengthened. And what means dollars to the manufacturer means a greater measure of prosperity to the community in which his money is circulated. The larger and more representative the organization the more influence it will possess, and the more important will be the results it is capable of achieving.

It is to be hoped that every member will do what he can to strengthen the hands of the Association by inducing others to join it, and that those who are not members will recognize the obligations under which they have been placed by granting the Association the support it so richly deserves.

THE FORESTRY CONVENTION.

MORE than usual importance attaches to the convention which is to be held this month in Ottawa under the auspices of the Canadian Forestry Association. It will be remembered that during its last session Parliament authorized the summoning of a general meeting of those interested in forestry, in order that there might be a thorough discussion of the conditions which have brought about such a marked reduction in our visible supply of wood. The approaching convention, called for the 10th, 11th and 12th inst., is the outcome of this decision, and its deliberations promise to be fraught with deep significance to the nation as a whole.

A cordial invitation has been extended, through the Secretary of the Canadian Forestry Association, to all members of the Canadian Manufacturers' Association, and it is hoped that as many as possibly can will avail themselves of the opportunity to be present.

EXECUTIVE COUNCIL

DECEMBER MEETING.

Mixed Carload Difficulty Settled by Compromise—Modification of Owner's Risk Regulations—Convention Arrangements already well in hand—Two New Sections Formed—Proposed Changes in Industrial Canada—40 New Members.

THE regular monthly meeting of the Executive Council of the Canadian Manufacturers' Association was held in the Association offices, Toronto, on Thursday, December 21, 1905.

As Mr. C. C. Ballantyne, Montreal, the President, was unavoidably absent, the chair was taken by the 1st Vice-President, Mr. H. Cockshutt.

Other members present were:—Messrs. Geo. Anderson, Toronto; Henry Bertram, Dundas; Geo. Booth, Toronto; L. V. Dusseau, Toronto; J. F. Ellis, Toronto; Thos. Findley, Toronto; J. D. Flavelle, Lindsay; H. W. Fleury, Aurora; E. J. Freyseng, Toronto; W. K. George, Toronto; Geo. Gillies, Toronto; R. B. Hamilton, St. Catharines; Lloyd Harris, Brantford; S. R. Hart, Toronto; E. G. Henderson, Windsor; W. K. McNaught, Toronto; J. B. Maclean, Toronto; W. C. Phillips, Toronto; J. A. Publow, Hamilton; John Ransford, London; Carl Riordon, Merriton; A. S. Rogers, Toronto; T. A. Russell, Toronto; J. T. Sheridan, Toronto; J. M. Sinclair, Toronto; F. J. Smale, Toronto; J. M. Taylor, Guelph; R. L. Torrance, Guelph; Daniel Wilson, Collingwood.

Communications were received:

1. From the following members of the Executive Council unable to be present: Messrs. R. C. Wilkins, Wm. Smaill, Edward Gurney, J. S. Dougall, A. W. White, A. Saunders, T. H. Estabrooks, Jno. Stevely, Thos. Roden, R. McLaughlin, Geo. Sweet, J. P. Murray.

2. From Mrs. R. W. Elliot, expressing appreciation of the action of the Executive Council in sending a message of condolence on the death of her husband.

3. From the Secretary of the Ottawa Board of Trade, suggesting changes in the Ontario Assessment Act. This letter was referred to the Parliamentary Committee.

4. From the London Chamber of Commerce advising the Association that the Sixth Congress of the Chambers of Commerce of the Empire would be held in London, England, on July 8th, 1906, and following days, and that February 1st, 1906, would be the latest date for receiving resolutions for consideration at that Congress. This letter was referred to the Commercial Intelligence Committee with instructions to report at the January meeting of the Executive Council. Members of the Executive and members of the Association were invited to suggest subjects for resolutions to the Commercial Intelligence Committee. The Committee was also asked to recommend delegates to attend this Convention.

A resolution of the Canadian Furniture Manufacturers' Association asking for leave to organize a furniture section of the Manufacturers' Association was presented and the organization of a Furniture Section was approved of.

Mr. Carl Riordon put before the Executive Council a copy of the minutes of a meeting of the Pulp and Paper Manufacturers held in Montreal, one of the resolutions passed at that meeting being authority to organize a Section of the Canadian Manufacturers' Association. The Council approved of the organization of this Section.

Reports of the officers and committees were then taken up and upon motions were received and, with certain amendments, were unanimously adopted.

Secretary

The Assistant Secretary reported the absence of the Secretary, who was visiting the Branches in Quebec and the Maritime Provinces. He also reported that 18 meetings had been held since the last council meeting, and that all the standing committees of the Association were reporting with the exception of the Commercial Intelligence and Parliamentary.

Treasurer.

The Treasurer, Mr. Geo. Booth, submitted the monthly statement showing receipts and expenditure of the Association up to December 1st. The statement was considered as satisfactory.

Finance Committee.

Report of the Finance Committee was presented by Mr. J. F. Ellis. It recommended the payment of accounts covering the regular monthly expenditure. It reported against the printing of the Committee reports for presentation to the Executive, but stated that other means would be taken to arrange, if possible, to have the reports distributed. The Committee also reported against an expenditure for legal services to ascertain the exact status of INDUSTRIAL CANADA as regards the requirements of the Postal Acts. The salaries of the office staff were considered and increases recommended.

Tariff Committee.

The report of the Tariff Committee was presented by the Chairman, Mr. W. K. McNaught, in part, as follows:—

"The plan for presenting tariff arguments to the Tariff Commission, as decided upon some months ago, has been working out satisfactorily. More than one hundred different section meetings of the members of the Association have been held and, with one or possibly two exceptions, the different interests have come together and unanimous arguments have been presented to the Tariff Commission. There are, however, some important cases yet to be presented, but these are well under way and will be put before the Commission at the first opportunity.

"The Committee recommend that after the Tariff Commission returns to Ottawa, a small but influential deputation representing the Association should appear before the Commission and present a general case for the manufacturers."

The Committee made other recommendations, which were adopted, as follows:—

(1) "That the proportion of British labor demanded by the preferential tariff should be construed by the Government so as to exclude packing, discount, profits and freight.

(2) "That a suggestion of Mr. J. P. Murray to the effect that manufacturers in presenting their requests for tariff revision should, where possible, have representations made by their employees supporting their requests, should be carried out where feasible.

(3) "That an editorial should be published in INDUSTRIAL CANADA on the question of combines."

In addition to the above a recommendation to the effect that the preferential tariff should be made to apply only to goods entered at Canadian ports was held over for consideration at the next meeting of the Executive Council.

Reception and Membership Committee.

The report of the Reception and Membership Committee was presented, in the absence of the Chairman, by the Assistant Secretary.

The Committee reported that the circular, requesting from the members of the Association the number of their employees, was being answered satisfactorily. It also reported that the first monthly dinner of the Association, held in Berlin, had been a decided success and that arrangements were in progress for the January dinner to be held in Sherbrooke, Que.

The Committee recommended that the annual meeting of the Association be held in Winnipeg on Monday, Tuesday and Wednesday, September 17th, 18th and 19th next. This arrangement would enable the eastern manufacturers to leave Toronto, Montreal, and other points on Friday, September 14th, and arrive in Winnipeg on the 16th inst. Arrangements are being made with the railways for cheap rates to Winnipeg and also for excursions after the annual meeting to Edmonton, Calgary and the Pacific coast.

Forty applications for membership were recommended for acceptance. The names of these new members are given in another column.

"Industrial Canada" Committee.

Mr. T. A. Russell, Chairman of the Committee, presented this report. It recommended the acceptance of the resignation from the Committee of Mr. A. W. Thomas who, owing to extra duties on the Finance Committee of the Association, found it necessary to resign.

The Committee reported having carefully considered the necessity for making some changes in INDUSTRIAL CANADA to enable the Committee to give to the members and to the general public a paper that would be more attractive and more valuable from the standpoint of a trade journal publication, and were of the opinion that the reports of the Executive Council and Committees and Branches of the Association should be printed in a separate portion of the paper, published in greater detail, and sent only to the members of the Association; and further, that the reading matter of INDUSTRIAL CANADA should be made more attractive by the publication of special articles on live topics. The Committee recommended to the Executive Council that the February issue should be published as outlined above.

Other recommendations of the Committee were:—

(1) "That a page of trade marks of the members of the Association and a page or one-half page advertisement advertising method and system in presenting advertisements should be published each month, and (2) that the paper should be mailed to the members in Toronto and not delivered as at present.

Insurance Committee.

In the absence of the Chairman of the Committee the report was read by the Manager of the Insurance Department.

It dealt with the correspondence between the Insurance Committee and the members of the Canadian Fire Underwriters' Association, and other matters. The report was considered to be of such importance that it was decided to have the same printed and put in the hands of each member of the Executive Council before the next meeting.

Railway and Transportation Committee.

Mr. R. Hobson, Chairman of this Committee, being absent, the report was presented by the Manager of the Transportation Department.

The report was a most satisfactory one, dealing with a large number of important changes in the railway classification, which had been made since the last meeting. This report is published in full in another column.

Technical Education Committee.

In the absence of the Chairman this report was read by the Assistant Secretary, and was as follows:—

"The Committee carefully considered the discussion that took place at the annual meeting in Quebec on the report of the Technical Education Committee, and along the lines of the suggestions approved of at that time, they beg to recommend that two paragraphs as given below be added to the report:—

(1) Insert page 176 October INDUSTRIAL CANADA—
"While mindful too of the splendid instruction in Agriculture given by Ottawa and Ontario, of the great value of Sir Wm. Macdonald's generous support of university and manual training and of the work of a number of small technical schools in Quebec, the Committee have concluded that Canada has as yet made only a beginning in the serious work of technical education."

(2) Insert after the first paragraph, page 177—
"Your Committee in this reference to conditions elsewhere do not seek to be exhaustive, as nearly all of the more prominent European states are giving a great deal of support to technical education. They only seek to illustrate the great value which other manufacturing and commercial countries have placed on practical education. To do more would be beyond the limited time at the disposal of the present Committee."

The Committee recommended that this report should be presented to the Government by a deputation, that each branch of the Association be requested to appoint a delegate or delegates, or, if this was not possible, to put their views in writing for presentation to the Government, and that the present Technical Education Committee be appointed, with power to add to its numbers, to represent the Executive Council for this purpose.

The Committee decided that it was most advisable and important that the views of the Manufacturers' Association as regards technical education should be placed before the present commission investigating the management of Toronto University, and accordingly an appointment will be asked for in the near future.

Reports of the work of the Montreal and Toronto Branches were duly presented and are published in another column.

The meeting then adjourned.

RAILWAY AND TRANSPORTATION COMMITTEE.

The monthly meeting of the Committee was held on Friday, the 8th of December, 1905.

Mr. Marlow, who had just returned from Montreal, reported results of the conference with the Advisory Committee of the Canadian Freight Association re complaint of the Canadian Manufacturers' Association of Canadian classification rules, now before the Board of Railway Commissioners, as follows:—

Rule 1—Minimum Weights.

The present arrangement of minimum weights for cars in excess of the standard 36 ft. 6 in. in length were found to lack uniformity and to be based upon no regular scale of increase. The Association asked for an increase in minimum weight for cars over the standard, having a uniform rela-

tion to the increased cubic space of the larger cars. This would equal in round figures an increase in the minimum weight of 5% for each additional foot in the length of the cars. The railways were willing to accept this basis over the minimum weight for cars 40 ft. 6 in. in length where the minimum weight for standard cars is 16,000 lbs. and over, but where the minimum for standard cars is 14,000 lbs. and under, the railways desired an increase based on the 5% per foot additional for cars of 40 ft. 6 in. long, and a further increase of 7½% per foot for cars over 40 ft. 6 in., in all cases the net figures to be rounded off under the following rule:—

Under 250 lbs.—dropped.

251 lbs. up to 750 lbs. to be called 500 lbs.

751 lbs. up to 999 lbs. to be called 1,000 lbs.

The railways pointed out that this basis is below the current Official Classification basis. They do not claim it bears any proper relation to the increase in the capacity of cars, but offer it as a compromise.

After some discussion, it was decided that the arrangement would be accepted. If any particular classes of traffic are found to be seriously affected, they can be dealt with individually later on.

Rule 2—Mixed Carloads.

A resolution passed by the Canadian Freight Association on this subject was reported by Mr. Marlow. This resolution indicated that the railways are convinced that the difference in conditions east and west of the great lakes requires a difference in the rule governing the shipment of mixed carloads. They agree to relieve hardships found to exist under the present restrictions when reported to the railway companies, and undertake a careful revision of the lists for this purpose. Under this resolution particular grievances of manufacturers reported to the Association have been dealt with by the Canadian Freight Association, and, as a result, the cause for complaint has been removed in all but two instances. After careful consideration and discussion, it was decided that as the grievances have substantially been removed the complaint of the Canadian Manufacturers' Association should be withdrawn from the Railway Commission.

Rule 6—Articles Requiring Flat Cars for Transportation.

The Canadian Freight Association is prepared to revise this rule and reduce the minimum weight from 6,000 to 5,000 lbs. and to insert exceptions covering smoke stacks, boilers, structural iron, beams, columns and girders and shafting, making the minimum on these articles 4,000 lbs. This was considered by the Committee a satisfactory adjustment of the complaint.

Rule 7—Owner's Risk.

The Canadian Freight Association are prepared in answer to the complaint on this subject to cut out of the classification the stipulation, owner's risk, in over 250 cases. Wherever the stipulation is left they propose to define it as follows:

- Owner's risk of breakage.
- Owner's risk of chafing.
- Owner's risk of damage.
- Owner's risk of deterioration.
- Owner's risk of fire.
- Owner's risk of loss.
- Owner's risk of sifting.
- Owner's risk of leakage.
- Owner's risk of weather.

Instead of, as formerly, at owner's risk, which might include anything. It is understood also that the stipulations above cover only loss or injury, the result of the ordinary handling

incident to the carriage of the goods. Wherever loss or injury results from negligence or want of skill, the railways are, of course, responsible under the statute.

With regard to glass goods, the railways refuse to remove the stipulation, owner's risk of breakage, under the current rates. On agricultural implements and machinery they remove the owner's risk stipulation where the goods are boxed; but where not packed they stipulate owner's risk of chafing and breakage. On furniture where boxed owner's risk stipulation is removed, but where the same rate is given for furniture wrapped or crated and boxed, the condition at owner's risk of chafing and breakage applies to the wrapped and crated parcels but not to the boxed.

Liquids, in glass, well packed, except acids, are to be carried without owner's risk stipulation.

Where goods rated at owner's risk are required to be transported at carrier's risk, the increase in rate will be changed from 50 per cent., as at present, to 25 per cent., thus making the increase about one class higher than the owner's risk classification.

These changes were thought by the Committee to be extensive modifications of the present position, and it was considered advisable under the circumstances to agree to their acceptance.

Rule 30—Smalls Charges.

The railways are not prepared to make any change in the charge for transportation of "smalls," as outlined in Rule 30. Owing to insufficient time, the matter was not fully discussed by the Committee and no definite decision was reached. It was considered advisable to request the Board of Railway Commissioners to postpone the hearing of this matter for six months.

Supplement to Classification.

Mr. Marlow reported that he had attended a hearing of the Board of Railway Commissioners at Ottawa on the 28th of November and opposed the application for increase in minimum weight on machinery in carloads, and rating on forgings in less than carloads, and also applied for reduced rate on hall seats boxed. The result of the hearing was that the increases were not allowed and the rating on hall settees boxed was reduced from double 1st to 1st class.

Interswitching at Lindsay.

At the same sitting the application of the town of Lindsay for interswitching of traffic between the Canadian Pacific and Grand Trunk railways was also heard, and Mr. Marlow took an active part in the proceedings. The Board of Railway Commissioners subsequently issued an order requiring the interchange of traffic as applied for in the terms of the order covering London interswitching, except as to rates of compensation.

A communication was presented from Mr. J. O. Thorn tendering his resignation as a member of the Committee. In view of the reasons expressed, it was decided to recommend the acceptance of his resignation, but in doing so, to record an appreciation of the very valuable services rendered by him to the Committee and to the Association.

TORONTO BRANCH.

The regular monthly meeting of the Toronto Branch Executive Committee was held on December 14th. There were present Messrs. W. B. Tindall (chairman), S. R. Hart, C. N. Candee, John Firstbrook, A. Jephcott, and J. W. Cowan.

A number of matters were considered by the meeting, the more important of which are outlined below.

The Secretary presented a statement showing the conditions on which water was supplied to manufacturers, and the rates charged in Hamilton, Detroit, Ottawa, Pittsburgh, Rochester, London, Buffalo, Montreal and Toronto. It was agreed, however, that no action should be taken at the present time.

The special Technical Education Committee of the Toronto Branch reported that a meeting had been held at which the Principal of the Toronto Technical School was present, and the situation as regards Technical Education in the city was fully discussed. The Committee expressed the opinion that the accommodation and equipment in Toronto were quite unsatisfactory, but that as the changes necessary involved an expenditure of a large sum of money, they had decided to make further personal investigations regarding the requirements of the school before definite recommendations were made.

As a result of the enquiry sent to the members, of whom 96 replied, it was shown that the assessment of 65 members whose returns could be properly tabulated had increased by only \$230,000, and the Committee decided that as far as the Toronto Branch was concerned they would wait until the Act had been in force for a longer period of time before making any definite recommendations.

The Dinner Committee reported that the November dinner had been a success both in point of attendance and financially, and that arrangements were made for the December dinner at which the subject of a trunk sewer for Toronto would be introduced by Mr. C. H. Rust, City Engineer.

Five applications for membership were approved of.

MONTREAL BRANCH.

The regular monthly meeting of the Montreal Executive Committee was held on December 14th, with the Vice-Chairman, Mr. D. Lorne McGibbon, presiding. There were also present: Messrs. J. J. McGill, J. S. N. Dougall, S. W. Ewing, Geo. Esplin and Clarence F. Smith.

Arrangements in connection with the proposed Association dinner at Sherbrooke in January, were discussed, and a committee consisting of Messrs. C. C. Ballantyne, J. J. McGill and the Montreal Secretary were appointed to go to Sherbrooke in regard to the matter.

The advisability of taking some stand in the approaching municipal elections in Montreal was considered, and it was decided that the Branch would take no official action in the matter, but the members individually would be recommended to do all in their power to elect capable representatives to the city council.

Seven membership applications were passed.

Two meetings of the Linseed Oil, White Lead, Paint and Varnish Section were held during the month, the chief business being the preparation of a case for the Tariff Commission. At the annual meeting of the section held on December 12th, the following officers were elected: Chairman, Robt. Munro; Vice-Chairman, E. Liersch; Secretary, Dakers Cameron; Executive Committee, A. Ramsay, J. S. N. Dougall and H. P. Livingston.

NEW MEMBERS

Passed by the Executive Council in December.

Belleville, Ont.

MARSH & HENTHORN.—Hoisting Engines, Contractors' Supplies, Boilers, Tanks, Etc.

Berlin, Ont.

THE BERLIN GLUE WORKS.—Glue.

✓ THE BERLIN INTERIOR HARDWOOD CO., LIMITED.—Bank, Office, and Store Fittings.

THE BERLIN LION BREWERY.—Lager.

✓ LIPPERT & Co.—Furniture.

I. E. SHANTZ & Co.—Foundry.

STAR WHITEWEAR CO.—Ladies' Shirt Waists.

Brockville, Ont.

✓ THE BROCKVILLE LUMBER CO., LIMITED.—Sashes, Doors, Blinds, and other Wood Goods.

THE SHIRREFF MANUFACTURING CO., LIMITED.—Carpet Sweepers, Food Choppers, Wood and Iron Specialties.

Chatham, Ont.

THE CHAPLIN WHEEL CO.—Vehicle Wheels.

✓ THE DEFIANCE IRON WORKS CO., LIMITED.—Launches and Gas and Gasoline Engines, Manure Spreaders, Hay Car Bring-backs.

✓ THE S. HADLEY LUMBER CO., LIMITED.—Lumber, Bank, Store, Office and Hotel Fixtures, Wood Finish, Etc.

• THE T. H. TAYLOR CO.—Flour and Woollens.

Hamilton, Ont.

✓ F. W. BIRD & SON.—Roofings, Waterproof and Insulating Papers, Paper Boxes and other Specialties.

Lindsay, Ont.

THE R. M. BEAL LEATHER CO., LIMITED.—Leather and Larrigans.

Listowel, Ont.

✓ THE LISTOWEL FURNITURE CO., LIMITED.—Furniture.

Meaford, Ont.

✓ THE MEAFORD MFG. CO., LIMITED.—Furniture.

Montreal, Que.

C. O. CLARK & BROS.—Bells.

DUFRESNE & LOCK.—Shoes.

L. LEWIS & Co.—Cigars.

GEO. A. MACE & Co.—Paper Boxes.

✓ ST. LAWRENCE SUPPLY CO., LIMITED.—Contractors' Machinery, Picks, Crowbars, and other Tools and Forgings.

V. E. TRAVERSY.—Sashes and Doors, Lumber, Etc.

WOODBURN SONS CO., LIMITED.—Advertising Specialties.

Plattsville, Ont.

BAIRD BROS.—Furniture.

Preston, Ont.

✓ THE CROWN FURNITURE CO. OF PRESTON, LIMITED.—Furniture.

Sorel, Que.

✓ JAS. SHEPPARD & SON.—Lumber and Timber.

St. Basile, Que.

✓ MONTREAL PAPER CO.—Paper.

Stratford, Ont.

THE GLOBE-WERNICKE CO., LIMITED.—Section and Filing Cabinets, "Elastic" Book Cases, Roll Top Desks, Supplies for Card Indexes, Office Tables, Typewriter Desks.

Toronto, Ont.

S. F. BOWSER & Co., INC.—Oil Pumps, Oil Tanks and Syphons.

THE 5 IN 1 LETTER-ENVELOPE CO., LIMITED.—Envelopes.

THE INTERNATIONAL GAS APPLIANCE CO., LIMITED.—Incandescent Gas Mantles.

KNAPP ENVELOPE CO.—Envelopes.

MICHIGAN AMMONIA WORKS—Ammonia.

H. & A. SAUNDERS.—Gold and Gold-Filled Jewelry.

Waterloo, Ont.

BECHTEL BROTHERS.—Brick-making Machinery and Bricks.

✓ SNYDER BROS. UPHOLSTERING CO., LIMITED.—Upholstered Goods.

Windsor, Ont.

BRITISH AMERICAN BREWING CO., LIMITED.—Beer and Porter.

Winnipeg, Man.

COCKSHUTT PLOW CO., LIMITED.—(E. A. Mott, 4th Member).

GORDON IRONSIDE AND FARES COMPANY, LIMITED.—Fresh and Cured Meats, Etc.

INSPECTION

BY L. J. STREET, Vice-President, The Canadian Inspection Co.

THE word "Inspection," while denoting in itself its meaning or significance, is really such a broad term, that a brief synopsis of the work carried on by inspection companies is first necessary before entering into a description or explanation of same.

This work consists in the inspection by one or more of the experts on the staff of an inspection company, of the steel, or other material entering into bridges, buildings, and other structures; supervising the manufacture of cast iron and wrought iron pipes, rails, railway and street cars, engines, car wheels, axles, etc. etc.; also the analyses and assays of all kinds of commercial materials and the physical tests of iron, steel, cement, stone, brick, etc.

A purchaser of any of the above, wishing to feel perfectly satisfied that the shapes, plates, castings, or whatever his order may consist of, possess the chemical determinations and physical requirements desired, finds a very easy solution by having his order "mill inspected" by an expert in that line, who will personally supervise the work and see that his requirements are fulfilled; the *chemical* specifications by testing and verifying the different "melts," and the *physical* by first cutting from the finished plate, angle, or beam, as the case may be, a specimen about 18 inches long, by about one square inch area, from which are determined the elastic limit, tensile strength, elongation and reduction of area at point of fracture, and also the character of the fracture—

[illegible]

Fig. 1

In the United States and Europe, inspection as conducted by such well-known companies as the Pittsburgh Testing Laboratory, the R. W. Hunt Co., Osborne Engineering Co., J. A. Farnell, and others, is greatly in demand, proving itself to be an important factor in maintaining a high standard of excellence among a great many lines of manufacture.

In Canada, while there are two purely Canadian companies, as well as Canadian representatives of some well-known American concerns, inspection may be said to be still in its infancy. It is, however, rapidly gaining favor and springing into prominence. Why—will doubtless be explained by the following brief description of the methods adopted in some of the many lines of inspection.

whether silky or granular. Similar specimens are also used for the bending test, and a piece six inches square for a drift test. Then follows surface inspection, each plate or shape being carefully examined for surface defects, gauged for thickness, and the melt number checked. The result of this inspection is embodied in a report, (see Fig. 1), which is sent to the customer.

Shop Inspection: This branch of inspection applies after the steel or iron has left the mill, and is received into the structural or bridge shop to be fabricated according to drawings, into members all ready to go together in the field. In the shop work it is necessary for the inspector to be con-

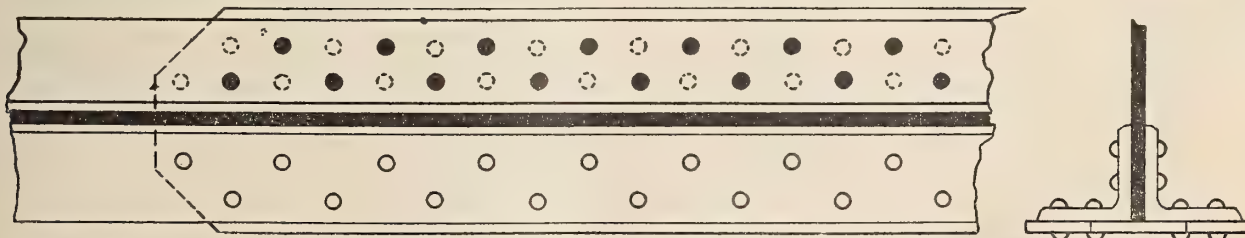


Fig. 2. Darkened circles represent mispunched holes in cover plate; dotted circles show where holes were punched in angle and where same should have been punched in plate.

Inspection covering steel and iron is divided up into three classes, viz.: "Mill," "Shop," and "Field."

Mill Inspection covers the inspection of all the products of a steel mill, such as rolled structural shapes; plates for boilers, bridges, ships and tanks; forgings; castings of steel and iron, etc., etc.

stantly in attendance, supervising throughout the various operations of converting the raw material into the finished structure or member. His work begins with verifying the correctness of the wood or iron templets, as misreading of drawings in templet shop is a very serious source of error, in that the mistake is not confined to one, but runs through

all of the pieces from that templet. Then comes the laying off of material from templet. Here great care has to be exercised, as much good material is often times spoiled by laying off wrongly, and material being consequently wrongly sheared or punched. (See Fig. 2, as an example of mis-punching caused by wrong laying off and marking).

After the laying off and marking, comes the punching, drilling, assembling, and reaming of the various parts, followed by the rivetting; also the final finish and fit of the completed members. It is in the earlier stages of the foregoing operations, that errors or bad workmanship most frequently occur, and unless detected at the time, or prevented, cannot afterwards be rectified in a great many cases. A few of the most common examples of bad workmanship are shown below. (See Figs. 3, 4, 5).

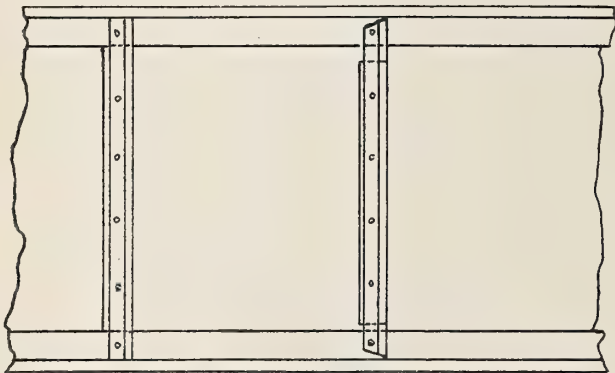


Fig. 3. Showing stiffener and filler plate and web of girder—as they should be, and as they sometimes are found, with filler plate short, allowing space for water to lodge and stiffener angle not bearing at ends.

In addition to these, there is the buckling in the webs of large built-up girders, caused in many cases by plates not being first put through the rolls to be straightened; the getting out of too many "rights" and too few "lefts," where right and left hand are called for, and so on.

Constant attention is also required during the rivetting process, as it is by watching the heating of the rivets, and the work of the rivetting machines that the cause of badly formed or loose rivets is detected, and can usually be at once rectified. Of course, in cases of bad design, as in Fig. 6, where the rivet already driven leaves no room to get the other rivet down, "flat-head" rivets should be driven. At same time the matter should be taken up strongly with

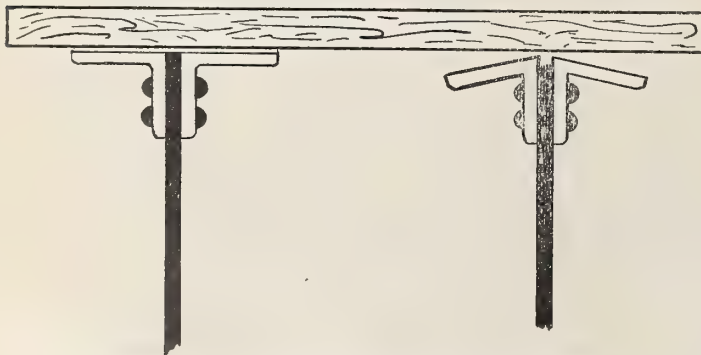


Fig. 4. Showing upper flange angles at true right angle with web and web plate well up, giving full bearing area for tie; also showing angles with droop and web plate not up, allowing space for water to lodge and leaving only small bearing area.

draughting office to avoid a recurrence. Usually, however, an expert inspector foresees and detects this before holes are punched, and in time to correct same.

Again, in cases where heads of rivets are driven against the sloping side of a flange of a channel, there is a great tendency to have only one side of rivet head bearing, (see

Fig. 7). This can always be prevented by having the side ground down to the same slope. (See Fig. 8).

All rivets, after being allowed a certain time to cool off, are "tapped" with a small hammer to test their tightness. At the same time the condition and shape of the head is noted, no burnt or mis-shaped heads being accepted. Of course, in a well-equipped bridge shop where heavy direct-acting rivetting machines are used, and there is an air pressure of from 100 to 125 lbs., good rivets can usually be got without much trouble, but where rivets are driven with small pneumatic hammers, such as are used on "field" erection, the matter of good rivets is a serious one. Fig. 9 will show a few of the common distortions met with.

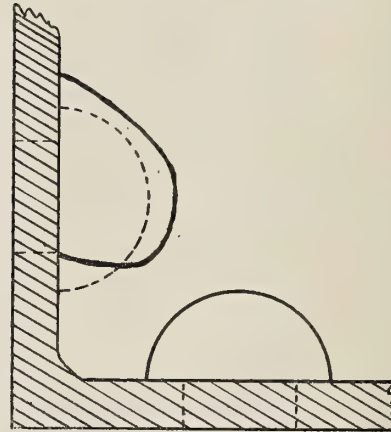


Fig. 6. Showing mis-shaped rivet head caused by bad design.

Field Inspection: Here it is that the inspector supervises the erection or assembling of the various members into the bridge or other structure, being particularly careful on such points as each member going into its proper position, plumbing of columns, good field connections, tight rivets, with hemispherical neatly cupped heads, having a full bear-

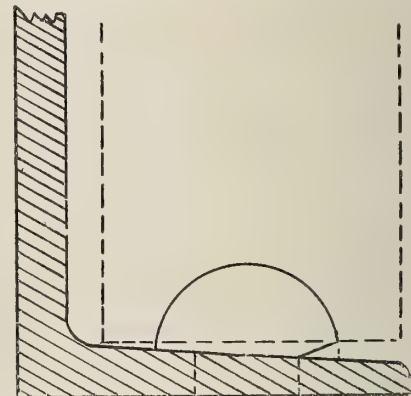


Fig. 7. Rivet Head only bearing on one side.

ing, and not such as shown by Fig. 9. Occasionally a member will be properly constructed at the shop, but will be wrongly erected. (See Fig. 10). And this latter often leads to reckless mutilation of members to make same fit, whereas were they erected properly, no trouble would be expected.

This branch of inspection necessitates the constant attendance of the inspector at the foundry while pipe are being made, so that he can keep track of the general run of the work as it is being turned out. His duties consist in making frequent tensile and transverse tests to determine the quality of the iron used, in forwarding samples to the laboratory for chemical analyses, and in calipering the cores and testing same with a straight-edge before they are placed in flasks. The latter is a particularly important point, as any sag in the core means a thin-sided pipe. (See Fig. 11).

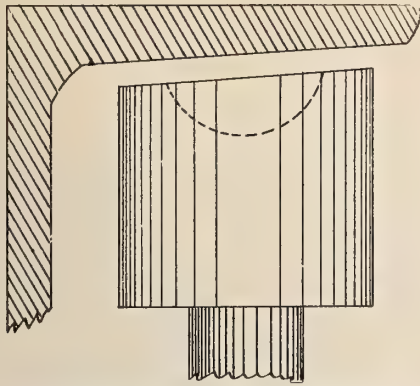


Fig. 8. Showing method of preventing defect as shown in Fig. 7, viz., by grinding die down to same slope.

After pipes are poured, he sees that same are not drawn from flask while showing red color of heat. When pipes are drawn, same are all gone over for surface defects, all light spots being probed with a pointed hammer. Faucet and spigot ends are carefully examined, and measurements checked, and calipered to see that core was properly centered, as if not a thin-sided pipe would be the result.

Following this comes the inspection of the cleaning and chipping of pipes, the heating of same to 300° Fahrenheit, so that when dipped in tar bath a thick yellowish smoke rises; testing tar bath so that coating on pipe may be neither too hard nor too soft, witnessing the hydraulic pressure test on each individual length of pipe, and finally the weighing and loading of same.

A rail inspector, with his thoroughly practical experience

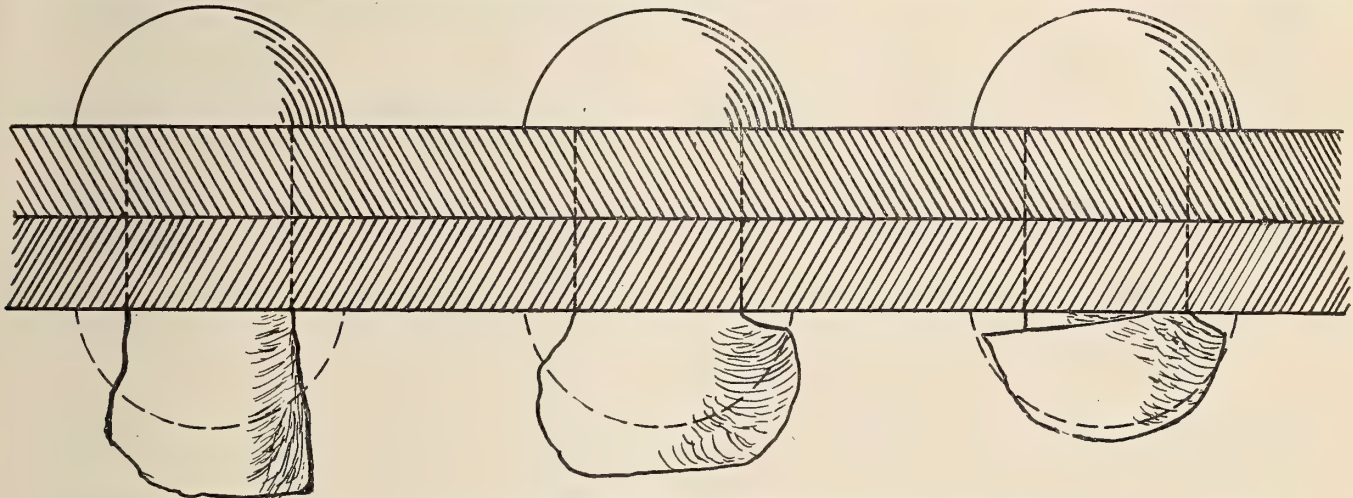


Fig. 9. A bunch of bad rivets.

at steel mills, inspects the surface of every rail, seeing that the section is in accordance with templets, that the weights and lengths are correct, that the rails are straight, and verifying the distance and spacing of the drilling machines. This, in addition to making regular tests of the quality of the steel being used, and noting that the analyses of the steel made at the mill laboratory are in accordance with the specifica-

all the minute details of construction or manufacture. An inspector, therefore, who is expert in their particular line, is always a welcome acquisition to the works or shop, as it practically means absolute satisfaction all round, and a corresponding increase in the reputation of that shop for turning out first-class work, exact to drawings, and fully up to all requirements.

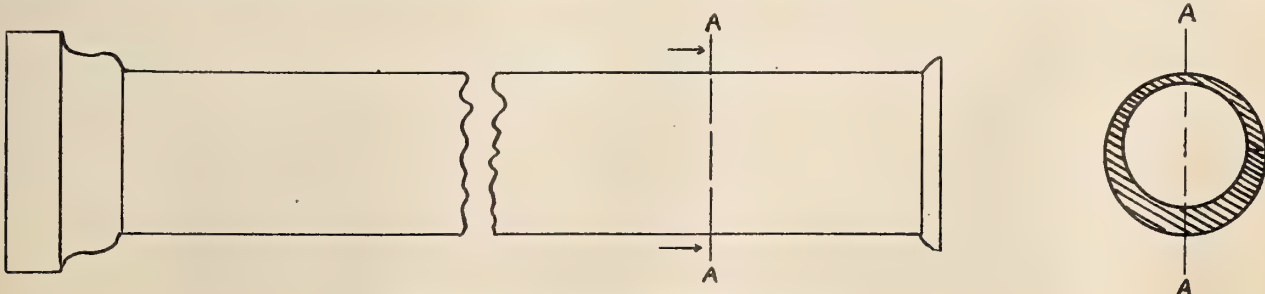


Fig. 11. Style of heading used in mill inspection report.

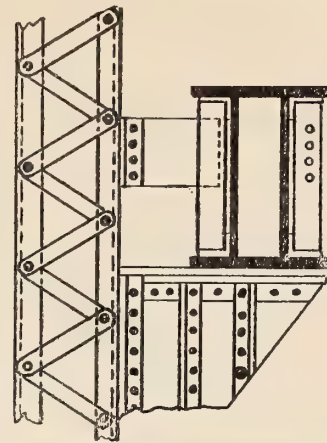


Fig. 10. An illustration of careless field work, girder turned wrong side out, preventing tie plates being connected.



The Industrial Future of the Empire



THE first of the winter series of banquets under the auspices of the Reception and Membership Committee of the Canadian Manufacturers' Association, was held in the Walper House, Berlin, on Monday evening, December 18th. The attendance was large and fairly representative of the industries which centre about that thriving portion of the province. Over fifty of Berlin's most prominent and influential citizens were present. A strong deputation came in from Toronto, while Hespeler, Galt, Brantford, Preston and Collingwood each contributed its quota, bringing the total number close up to one hundred.

Mr. L. J. Breithaupt, of the Breithaupt Leather Co., Limited, presided. At his right sat the guest of the evening, Mr. Alfred Mosely, M.P., of the London Chamber of Commerce, and at his left Mr. W. B. Tindall, Chairman of the Toronto Branch of the C. M. A. Others at the head table were:—His Honor Judge Chisholm, Berlin; Mr. Harry Cockshutt, Brantford; Mr. C. H. Mills, President of the Board of Trade, Berlin; Mr. George Pattinson, M.P., Preston; Mayor Krantz, Berlin; Mr. L. V. Dusseau, Toronto; and Mr. R. O. McCulloch, Galt.

After the menu had been partaken of, the Chairman arose to propose the toast to His Majesty the King, which was received with the customary demonstrations of loyalty.

Mr. Breithaupt then extended a hearty welcome to the visiting members of the Association. The local committee were delighted, he said, with the general response which their invitation had met with. He referred with pride to the substantial progress which had been made by Berlin and surrounding towns along the line of industrial development, and hoped that, in common with every other section of the country, they might continue to share in the wonderful prosperity which seemed to be assured for Canada, "the land of the twentieth century."

The toast to the "Guest of the Evening" was proposed by Mr. W. B. Tindall. While not himself a member of the British Excursion party, Mr. Tindall claimed that he was but voicing the sentiments of all those who had participated in that event when he said that they were deeply grateful to Mr. Mosely and his associates of the London Chamber of Commerce for the splendid arrangements made for their entertainment in England. Mr. Mosely came to them now as a man of large affairs. The time had arrived when it seemed highly desirable that the various parts of the Empire should be cemented more firmly together, and Mr. Mosely's visit to Canada was for the purpose of investigating how this might best be accomplished. He hoped, by personal observation and by personal contact with business men, to obtain a clearer insight into tariff conditions as affecting the Empire.

Canadians were fortunate in having the opportunity of listening to a proper exposition of Mr. Chamberlain's policy from one who enjoyed his confidence, and it was to be hoped that they would approach the subject with an open mind, and not allow themselves to be biased by the misrepresentations that had appeared in the press. The tariff should not be made a matter of politics, but rather a business study of business conditions by business men.

On rising to respond, Mr. Mosely was given a very warm reception, which he gracefully acknowledged on behalf of Mr. Chamberlain's Tariff Committee.

He stated that he had come to Canada with a two-fold purpose: first, to investigate tariff and business conditions on the spot, and second, to present Mr. Chamberlain's own views to the people of this country.

If a country was to be truly great it must be a manufacturing country. From the earliest days of steam and progress England had led the way; she was the first great manufacturing country in the world. But while she had clung to the doctrine of universal free trade conditions all about her had changed. Other countries had built up tariff walls against England's goods, with the result that she no longer led the world as a manufacturing nation. Her supremacy had been challenged right and left, until to-day her work people were but partially employed.

In these days of keen competition, if a manufacturer was to prosper he could only do so by operating his plant to its fullest capacity. England under free trade had become the dumping ground of the world. The manufacturer met with increasing difficulty in marketing his goods abroad, while at the same time he found his home market being encroached upon and demoralized. The fixed charges connected with the maintenance of his plant were large, so that if his operation were curtailed the cost of production rose in proportion. To-day he was suffering seriously from that condition. His plant was idle three or four days out of every week. Meanwhile the manufacturers of other countries had secured their home market by walls of tariff, and the selling price in that home market was sufficient to cover all the fixed charges of operation. If their full capacity was 100 dozen of a certain article per week and the home market absorbed 80 dozen, then they could afford to sell the last 20 dozen for the bare cost of wages and raw materials. They could afford to dump their goods in the markets of the world at prices far below what their competitors were compelled to sell for. This practice spelled ruin for the markets of England, for it was the dumped goods which set the price. Works had become unremunerative and manufacturers had been reduced to desperate straits. Among the working classes, the standard of living had been lowered to such a level that only those who had seen it could appreciate it.

And yet, Mr. Mosely pointed out, some people claimed that England was never so prosperous as she was to-day. They attempted to substantiate this statement by reference to the swelling tide of imports and exports. But figures might be manipulated to prove almost anything, and it was fallacious to assume that such a phenomenon denoted increasing prosperity. For England in the meantime had been growing steadily in population and had of necessity to make bigger purchases. Moreover, competition had reduced profits, and to make the same income as before she must do business on a proportionately larger scale. England's prosperity was not a question of imports or exports, but depended upon how fully and remuneratively her work people were employed.

In Mr. Mosely's opinion things never looked blacker for England than they did to-day. She was going through a period of great commercial depression. Mr. Charles Booth had stated that 13,000,000 of her subjects were constantly on the verge of starvation, and this after fifty years of industrial supremacy! And yet people were so set in their ways, so conservative, so log-headed, that they endeavored to throw cold water upon a scheme that would relieve the situation, that would ensure prosperity for the manufacturer and employment for the workman.

The question had been asked, "Would not food cost more under the proposed tariff?" Mr. Chamberlain said that it would not. His idea was not to increase taxation, but rather to readjust it. He would take the tax off some articles and put it on others. He would endeavor to draw more closely the commercial tie between the Mother Country and the colonies, which were her best customers, by giving them a preference in her own market, and inducing them to buy from her those manufactured goods which they could not produce in their own country to advantage.

Mr. Chamberlain would place no restrictions upon those colonies that wished to manufacture for themselves. He was too great a statesman for that. Were he to place any limits of this nature he would be driving the last nail in the coffin of his progress. What he said to the colonies was this: "You manufacture your agricultural products; we in England must always be dependent upon you for our food supply; we will give you a preference on these supplies in our market, and in return you give us a preference on those manufactured goods which you cannot produce economically at home and which it will always pay you to purchase abroad."

At this point Mr. Mosely referred to the ruinous effect of dumping upon the English nail industry. It had practically been compelled to close its doors, and now that it was out of business prices were beginning to be raised again. Under such conditions no manufacturer could be expected to keep his plant up-to-date. Not only had his profits melted away, but he was actually operating at a loss. He owed his banker money. If he endeavored to secure new partners and more capital he had to reveal a state of affairs well calculated to discourage the careful investor. On the other hand, the foreign manufacturer who was making money could readily secure more credit from his banker. It was a comparatively easy matter for him to get the needed capital to enlarge the business when such a move became desirable. He had expanding markets, and could afford to buy the most modern machinery, to adopt the most approved methods, and engage in experimental work. The gap therefore between the two was constantly widening, the foreign manufacturer extending his business, improving the economy of his plant and becoming more prosperous, the English manufacturer losing trade, allowing his plant to become obsolete, and steadily growing poorer.

Canada, said Mr. Mosely, was in a unique position. She was, so to speak, but in her infancy. She had only begun to find herself. For years she had hid her light under a bushel, scarcely realizing what her possibilities were. But now she was commencing to learn what she could produce. There would be no stop to her development. Prosperity was bound to keep rolling through Canada like a snowball, as it had done in the United States. Mr. Chamberlain had been quick to realize the great future which this country had in store for it, so he decided to take time by the forelock. He knew that in any plan of Imperial federation the colonies must ultimately become the predominant partner. Before they grew up, therefore, while they were still in their infancy, he wished to lay deep and firm the foundations of a United Empire.

A glance at the map would show that in our colonies we were blessed with every variety of climate, we had every kind of soil, and could produce every material necessary to satisfy man's wants. Why then was England in her present condition? Why was she going backward? Some of her people would not admit that she was. But a little travel, a little more contact with the people and conditions of other countries would soon convince them. A remedy must be applied. England must no longer allow herself to be used as a dumping ground. She was calling the colonies to her aid.

She was saying to them: "Join hands with me and let us live together, for peace or for war, with all these great communities simply as parts of a great Empire, advancing those interests which mutually concern us, and freeing ourselves from any dependency upon those who are no friends to Great Britain."

Would the rescue come in time, asked Mr. Mosely, to save the English manufacturer, to save the tenant from falling into the lowest stages of degradation and misery? The working classes had almost begun to lose hope. Drink, despair and other ills which arise to curse mankind had begun to take possession of them. Their minds had become filled with all sorts of fallacies. They were combating the introduction of new machinery. It needed no pointing out that to restrict output and to interfere with economical methods of production was simply to take another step in the backward movement which had been begun and to bring the workman to a lower level than he had yet attained.

It had been stated that the British workingman was not adaptable. How, asked Mr. Mosely, could we expect him to be otherwise, when he was so down-trodden? The industrial establishments in which he worked were obsolete in parts; his own education was obsolete. Canadians had shown their appreciation of the importance of his question of education by placing it within reach of the working classes. The salvation of these people depended upon their being given the highest form of education that money would procure. The most valuable raw material a country possessed was its children. The young man of to-day could not be too well equipped for the industrial struggle ahead of him. There was a time when British pluck and backbone were supposed to be sufficient to attain success. That time was past, for now in addition to these qualities he must have scientific and up-to-date knowledge. Which were the countries that had shown the greatest prosperity? Unquestionably Germany, with the scientific training of her masses, and the United States, which had opened the gates of education to all capable of assimilating it. The remarkably uniform success which the Scotchman had attained the world over was attributable purely and simply to the thorough training which the schools of his country had given him, enabling him to think out problems whose solution it was impossible for the ignorant man to arrive at.

The generous manner in which Canadians had already responded in the matter of the preferential tariff had been a great source of inspiration to those who were battling for this cause in England, and it was their hope that Canada would raise still higher her walls of tariff against those who were endeavoring to drive England out of the Canadian market.

It was exceedingly unfortunate that the tariff should ever have been allowed to become a political issue. It was not a matter of politics but rather one of business; it involved the question of providing for ourselves and for our children. And yet in England there were those who were trying to throw this question into the melting-pot of a political campaign. The idea of cementing the Empire together was scoffed at. It was stated that Canadians, notwithstanding their apparent sacrifices were as individuals indifferent to this great question. If such an impression had been created, Canadians were themselves to blame for having maintained a dignified silence when their earnestness had been challenged. If they were to win they could only win by fighting and by shouting. They must let the world know that this was a live problem. They should discuss it at their public meetings, and forward reports of those meetings to the English press, for by so doing they would afford practical encouragement to their fellow workers in the motherland.

Ultimately, thought Mr. Mosely, the Chamberlain policy

must prevail, though he would caution Canada against being too sanguine for immediate results. It was a difficult task to educate the British workingman in all phases of this problem. Through misrepresentations he had become mystified. He was under the impression that such a system would only tend to make the rich richer and the poor poorer. He failed to see how anything else could result if, as he was led to believe, his bread would be taxed. Opponents of Mr. Chamberlain's policy had been unusually active in this connection. They had drawn a great many red herrings across the trail and had worked up a tremendous amount of prejudice, which could only be overcome by time and hard work. Defeat at the next election was only to be expected. It would take perhaps two, perhaps three more elections before Mr. Chamberlain's policy would meet with success. In the meantime it was useless to go into details of his scheme of tariff revision, for his tariff had not yet been framed. There were still a large number of industries to be investigated by Mr. Chamberlain's tariff committee, and after that all of the facts had to be fitted together in order that the maximum of good might be accomplished with the minimum of loss.

In concluding Mr. Mosely expressed his appreciation of the opportunity of addressing so many captains of industry and hoped that what he had said had appealed to them as reasonable, that they would give the problem their earnest consideration, and he bespoke their assistance, their patience and their hopefulness.

Mr. L. V. Dusseau, of Toronto, then moved, seconded by Mr. R. O. McCulloch, of Galt, "That this gathering wishes to place on record its high appreciation of Mr. Chamberlain's efforts to secure a better understanding of the trade conditions of the Empire. They feel that his policy must ultimately prevail and wish his efforts every success." This resolution was carried unanimously by a standing vote with great enthusiasm.

A toast to the manufacturing interests of Canada was proposed by Mr. Geo. Pattinson, Preston, and replied to by Mr. J. F. M. Stewart, Toronto, and Mr. Harry Cockshutt, of Brantford.

The last toast honored was that to our visitors, which was very happily proposed by Mr. "Artemus Ward" McBride of Waterloo, whose reminiscences of manufacturers and business men were exceedingly entertaining.

BOARD OF RAILWAY COMMISSIONERS.

A Number of Important Matters Disposed of in December.

The Board of Railway Commissioners held two important hearings during the past month at which matters relating to traffic were dealt with. At Toronto, on the 12th, the Board heard a deputation from the Board of Trade express their views with regard to the rules of the present Canadian freight classification. The deputation, comprising Mr. Peleg Howland, Vice-President; Mr. P. C. Steele, Second Vice-President; Mr. Hugh Blain and Mr. Joseph Oliver, spoke principally of the mixed carload arrangement, the rule under which goods are transported at owner's risk and "smalls" charges.

The stand of the Canadian Manufacturers' Association was practically endorsed in the matter of mixed carloads, and the railway commission was asked to see that the railways were prevented from restricting in any way the present arrangement and to provide that merchants and shippers shall be able to send the goods which they handle in their trade forward in mixed carload lots at a proper carload rating.

With regard to owner's risk, Mr. Blain advanced the view that a rule of this kind should not be permitted and

that the carriers should be required to transport all property which they carried under their common law liability. Where they gave reduced rates in consideration of being relieved from certain risks, it tended to create unjust discrimination in favor of shippers or traders who were willing, in order to secure lower rates, to take risks in the shipment of their goods which ought properly to be borne by the carrier and which put at a disadvantage a conservative and proper business house, who would not run any undue chance in the transportation of its property.

In the matter of "smalls" charges, it was stated that the present high charge tended to force the consolidation of several small lots into one shipment in order to get the benefit of the minimum charge. This was done at great inconvenience to shippers and had the effect of actually depriving the railways of revenue which they might otherwise secure were they to make a reasonably low minimum or "smalls" charge.

With regard to demurrage charges, the proposed rules as drafted in conference by the representatives of the Canadian Manufacturers' Association and the railways appeared to meet the views of the deputation, except that they were anxious to secure a reciprocal arrangement in connection therewith.

At Montreal on the 14th a final hearing was held with regard to these classification and demurrage matters. At that hearing the Board was informed on behalf of the Canadian Manufacturers' Association by Mr. Marlow, Manager of Transportation Department, that as a result of conferences held with representatives of the railways certain adjustments of the various rules of the classification complained of had been made and would be presented to the Board for approval. All of these, however, are dealt with at some length in the Report of the Railway and Transportation Committee to the Executive Council, so that mention of them may be omitted from the present review.

In connection with the demurrage rules, deputations appeared on behalf of the lumber and hay interests and requested an extension of the time allowed for the unloading of these commodities, more particularly for export traffic. The Chairman of the Board intimated that representations had been made in various parts of the country with regard to demurrage, and the Board would require time to go through the records and form conclusions with respect to the various phases of the subject which had been presented to them. In the meantime, he thought it might be wise to adopt a set of interim rules similar to those proposed, which were manifestly more favorable to the public than the present regulations, until such time as the Board had fully considered the subject and decided upon a set of permanent rules to govern car service regulations and demurrage.

The Chairman announced to those present that the Chief Traffic Officer of the Board would be required to report upon the various arrangements submitted for their approval. It is expected, therefore, that some short time may elapse before the Board will be in a position to announce their approval or disapproval of the arrangements reported.

An organization meeting of the Canadian General Service and Colonization Company was held in Montreal on December 11th, when Mr. William J. Poupore was elected President, and Mr. C. J. Stillwell, General Manager. The company, which is capitalized at \$250,000, has for its object to bring a desirable class of settlers, investors and visitors to Canada, and to promote the trade and commerce of the Dominion. Among other operations it will establish a permanent exhibition hall and commercial museum in New York City, the centre of American immigration.

PER DIEM VALUE OF FREIGHT CARS.

In the discussion of demurrage charges with railway officials, one frequently hears the remark that freight cars, for the detention of which a charge of one dollar per day is made, are capable of earning a much greater sum. At the hearing before the Board of Railway Commissioners in Winnipeg recently one of the railway officials is reported to have said freight cars would earn from \$5 to \$20 per day.

This is a point upon which the public is not informed and, in consequence, the statements are usually allowed to go unchallenged. To those who have been at a loss to answer this argument, the following statement by the Interstate Commerce Commission will be of interest. A complaint was made that a charge of \$1 per car per day assessed for demurrage was unreasonable. The only contention before the Commission was the amount of the charge. After hearing the complaint and answer, the Commission delivered its report and opinion from which the following is an extract:

"In all these cases the cars were owned by some railroad other than the one assessing the demurrage charge, and it was admitted that the defendant railroads paid for the use of these cars 20 cents per day. The complainants insisted that it was unreasonable for the defendants to charge them \$1 per day when they only paid 20 cents themselves; and this was the only testimony introduced by the complainants bearing upon the reasonableness of this charge. The defendants urged that 20 cents a day was not supposed to represent the fair rental value of a car but was simply an arbitrary sum agreed upon among the various railroads for the purpose of settling car accounts with each other. Their testimony tended to show that the rental value of a car was much greater than \$1 per day and that a demurrage charge much in excess of the sum collected might, therefore, have been properly assessed.

"If the reasonableness of this demurrage charge depended upon the fair rental value of a freight car we should be disposed to hold with the complainants. The witnesses on the part of the defendants testified that a freight car would earn on the average approximately \$2.20 per day and that, therefore, this was a fair charge for the use of that car. It appeared that this sum was arrived at by taking the whole number of freight cars in the United States, multiplying that number by 365, the number of days in a year, and dividing the total gross receipts from the transportation of freight by the product. It would be difficult to conceive of anything more absurd than this method of arriving at the fair rental value of a freight car. The car does not earn \$2.20 per day. The railroads of the United States may earn that amount from the transportation of freight, we have not verified the computation, and in the handling of that business the car is essential, but it is the railroad as a whole, not the freight car alone which produces these earnings. Undoubtedly there are times when a railroad could afford to pay \$2 a day, and more, for the use of a car, but that is due to some special exigency and the fact that this is the average sum which the railroad earns per freight car in service has no tendency to show the fair rental value of that car.

"While 20 cents a day may not be a fair compensation for the use of a freight car, even while standing upon the track and not in service, we agree with the complainants that the fact that the railroads have fixed upon that as the amount to be paid by one line to another for the use of its cars strongly indicated that in the opinion of the railroads themselves this is a fair price. Some railroads are borrowers and others lenders of cars under the system of exchange between connecting lines which is in vogue, and it is hardly credible that the lender would furnish the borrower with

"equipment for much less than a fair compensation. There is every reason for fixing upon some amount which is a reasonable return for the use of the car so that neither the borrower nor the lender may suffer.

"Formerly the price paid for the use of foreign cars was 7.5 mills for each mile the car actually ran. This was thought too high and it was reduced to six mills per mile, at which figure it remained for several years. Why, if railroads had been operating upon a compensatory basis up to three years ago, did they then fix upon a sum which was not supposed to be compensatory?

"The rates paid private car companies for the use of their cars lead to the same conclusion. Many freight cars have been in the past furnished by private companies which owned the cars and leased them to the railroads upon a mileage basis. For a long time the mileage allowed for the use of the ordinary freight car was 7.5 mills, the same as that paid by one railroad to another, and when the allowance between railways was reduced to six mills the allowance to private cars was correspondingly reduced. Upon this basis of charging most railway companies found it for their advantage to provide their own equipment in all cases where that equipment was required for continuous service. There are, however, some special instances in which the use of equipment is largely periodical, in which railway companies have continued to employ the cars of private car lines, the two most conspicuous examples being cattle cars and refrigerator cars. The Commission has recently investigated the use of these private cars. The cattle car costs about the same to build as the ordinary box car; it deteriorates somewhat more rapidly owing to the fact that the bedding rots out the floors and the bottom of the posts. There are several companies which furnish cattle cars as desired for six mills per mile, and the testimony shows that the average earnings of these cars is from \$7 to \$9 per month. Refrigerator cars are more expensive to build and maintain, and the allowance made for their use is generally 7.5 mills per mile. It is our impression that the business of providing cattle cars at six mills per mile is not extremely profitable, but it did appear that at the old rate of 7.5 mills per mile it was remunerative and that car companies did, out of their wheelage charges, pay shippers a premium for using their cars.

"It would seem that six mills per mile produces an average return not much in excess of 20 cents per day; probably in case of the average freight car not at all in excess of that sum: and it must be remembered that while demurrage is accruing the car is not in service and is not, therefore, depreciating as rapidly as when running. If, therefore, the question were whether one dollar per day was a reasonable sum to charge the shipper for the use of a freight car we should hold against the defendants. But that is not the question."

The remarks of the Commission above quoted will probably convince those who give thought to the subject that it would be well nigh impossible to arrive at any actual amount as the average per diem earning or value of a freight car. The Interstate Commerce Commission has ruled that a charge for delay to cars through failure to unload within a reasonable time is justified, but it does so for other valid reasons, such as: the duty of carriers being to transport freight and deliver it; the duty of consignee to receive such freight within a reasonable time; the consequences of neglect to do this through loss of the use of car; the uncertainty arising from the fact that cars are sometimes unloaded promptly and sometimes not; congestion of terminals, and the discrimination which would result if one person were permitted to use the car as a warehouse and the privilege denied to another.

The opinion states further that a charge for demurrage is not based upon the fair rental value of a car but rather is of the nature of a penalty, and while it should not be a sufficient amount to work an undue hardship upon a shipper who must occasionally pay it, it should be sufficient in amount to accomplish the purpose for which it was intended. The Commission also makes this significant remark: "Some reciprocal charge should perhaps be made against the railroad in case of failure upon its part to provide cars when ordered by the shipper, but that subject is not under consideration and no opinion is expressed upon it."

THE BEET GROWERS FAVOR PROTECTION.

Greatest Prosperity is Coming when the Farm and the Manufactory Join Hands.

At Berlin, Ont., on November 29th last, a large deputation of beet growers from all over the province waited upon the Tariff Committee to present their views. Unlike the small deputations of farmers who appeared at other places they recognized the general advantages to the agricultural classes of protecting the country's manufacturing industries. The market gardeners, the fruit growers and the tobacco growers, it will be remembered, asked for large increases of the tariff in their own particular line, but were inclined to view with alarm any increase in the protection of manufactured goods. The Berlin farmers on the other hand have viewed the matter rather from a national standpoint, and would afford practical encouragement to any industry which promises to develop the country's resources. Their address to the Commission was as follows:—

To the Members of the Tariff Commission:

You have listened, we are aware, at several of your sittings in Toronto, in London and other places to statements of the farmer's life, his work, his returns and his relation to the building of the common industries and wealth of the country. He has been pictured to you as a man of severe toil, of close economy and of small returns for his labor. We have the feeling that you may have received the impression from such evidence that farming to-day is unprofitable, that the farmer's lot is exceptionally unfortunate, and the crops he cultivates to-day, even the sugar beet crop, do not fairly remunerate him for his efforts.

Honorable Gentlemen of The Tariff Commission, we, who compose this deputation here before you to-day, are farmers who are assembled from eighteen fertile counties of this province to represent the agricultural side of Canada's new industry, the beet sugar industry, the success of which means an opportunity for renewed and greater prosperity for us on our farms. We are practical beet growers, every one of us, whose representations before you are not for ourselves only, but for our fellow farmers and beet growers distributed widely over this province and numbering many thousands. We do not come before you representing any political body or party element, but we are in deep sympathy with the out-of-date farmer in his mental misery, and would like to help to lead him to understand how to make his life more prosperous, that he may really grasp the meaning of the words of a much respected Canadian statesman who said: "The feeling is that as far as possible the manufactory and the farm should grow together, side by side, one helping the other, one reacting upon the other, one finding the food and the other finding the market, and each together building proportionately the common industries and wealth of the country."

We do not find, as has been told you in other places, that farming to-day is unprofitable, and we ridicule the evidence given you at certain of your sittings that beet growing is unprofitable. It is highly profitable to us in this and other counties, and there are among us numerous representatives from seventeen other counties who are prepared to speak from practical experience of the profits of beet growing. Those of us specially within driving distances of Berlin, Waterloo, Galt, Preston, and other manufacturing towns of this county are enjoying good home markets for every form of product the farm produces. What is it that gives these home markets, these good prices at our doors for the products of our farms? It is the growing population of these industrial towns prospering in our midst. These towns about us, especially Berlin, are prospering to-day as they never did before, and with their increasing prosperity our local markets have substantially improved. There is no strife between us who produce the food and our artisans who create our market. Together we prefer to toil in confidence for the general prosperity of Canada.

We, the farmers before you to-day, simply calling ourselves beet growers, friends of this new Canadian industry, agree with former representations made to you by representatives of farmers' organizations and associations that the agriculturalist is an important element in Canadian prosperity. This fact no one will dispute. But we feel convinced, through the development of our splendid local markets in this and other surrounding and industrious towns, that in like manner Canada's greatest prosperity is coming when the farm and manufactory join hands, grow up together, the one finding the food and the other finding the market.

You, with all true Canadians who wish to build up Canada, firmly believe that the resources planted by nature in the Laurentian Hills should not lie dormant but be developed by Canadian industry into iron, steel and other valuable and necessary finished products. How can any one who desires the greatest national prosperity tolerate rivalry between the farmer and the artisan, recognize natural resources in our country yet refuse to encourage their development? There lie dormant in Canadian soil and Canadian sunshine the elements out of which by the application of the Canadian industry of the farmer and the artisan, toiling together, can be produced our entire supply of sugar.

Is this industry, that is destined to become one of great magnitude in Canada, that will create a never satisfied market for such an enormous quantity of raw material out of which our sugar can be produced, not one of vital importance to us, the farmers, who possess the soil and are willing to produce out of it the raw material, which is a product indeed highly profitable to us? It has been told you by other deputations that it was a mistake to bonus this industry. We, who are the producers of its raw material, do not think so. It is a peculiar industry, the beginning of which is surrounded with great and exceptional difficulties, all of which to overcome necessitate the expenditure of enormous sums of money. Once established, however, it means for us, the farmers, a splendid market for the crop our soil is adapted to produce, the profits from which exceed the profits from any other crop we can cultivate. More than this, owing to its widespread influence along other lines of industry, trade and traffic, it will in time become national in its influence.

Further as an evidence of its relation to agriculture, we desire to inform you that the sugar beet after the extraction of sugar is an entirely satisfactory and profitable stock food, hundreds of carloads of which are shipped back to our farms to feed our stock.

We herewith beg to attach to these representations a statement of cash returns that we are receiving from this industry for the beets we cultivate for it, and we further beg

to attach a map showing the eighteen counties that are producing beets for this one factory alone, namely, Berlin, which beets are shipped distances of one hundred miles and more from as many as 140 different shipping points.

In conclusion we would again remind you that our deputation is representative of a body of beet growers numbering nearly 2,000 farmers, who have practical experience and, therefore, understand the full meaning of these sentences in which we have discussed before you the merits of the beet sugar industry.

NEW ZEALAND INTERNATIONAL EXHIBITION.

Since our last issue an official notice has been received of the New Zealand International Exhibition, to be held at Christchurch, N.Z., from November 1906 to April 1907. The object of the Exhibition, as announced, is educational, and it is intended to demonstrate the resources and possibilities of the colony as one of the world's food-producing factors, to make known its vast mineral resources, and to draw attention to its unrivalled and varied scenery, thermal wonders, and also the exceptional opportunities offered to sportsmen. More especially, however, its object is to bring under the notice of the industrial nations of the world the great field the colony of New Zealand offers as an outlet for enterprise, and for the consumption of all manner of up-to-date appliances and manufactures.

New Zealand's Imports.

Such an exhibition should command the support and attention of Canadian manufacturers, and if taken advantage of should accomplish tangible and satisfactory results. The imports of the colony for the past year (at least three-fourths of which were manufactured goods) amounted to £13,292,000, received from the following countries:—

Great Britain	£7,982,000	Ceylon	£173,000
Australia	1,893,000	Belgium	120,000
United States	1,528,000	Canada	113,000
Fiji Islands	517,000	Japan	85,000
Germany	309,000	France	55,000
India	290,000	Other countries	227,000

When it is considered that this expenditure on imports is required for the use and consumption of 850,000 persons, it can be understood what excellent opportunities are offered for exploiting the colony with up-to-date manufactures. This should particularly appeal to Canadians, whose goods are accorded preferential treatment.

Duty, Freight and Miscellaneous Notes.

Arrangements are being made with the steamship companies trading to New Zealand whereby exhibitors will obtain special rates of freight on exhibits, and provision will be made for the reception and installation of exhibits on such lines as will protect exhibitors from any excessive charges.

The Exhibition will open to the public on November 1st, 1906, but no application for space will be received later than the 31st March, 1906.

Each nation participating will be allotted a special court, irrespective of the class of exhibits shown, except in the case of machinery requiring to be supplied with motive power. The Canadian Court, by courtesy of the Department of Trade and Commerce, has been placed under the direction of the Canadian Manufacturers' Association, to whose head office, Toronto, all requests for information should be sent.

THE PRINTERS' STRIKE.

The agitation for the eight hour day and the closed shop in the printing trade continues to be the leading feature of the labor situation. In Canada the movement has not yet assumed large proportions, though it will undoubtedly develop as existing agreements expire, particularly if the Typographical Unions in the United States meet with any degree of success.

So far strikes have taken place in only three Canadian cities—Winnipeg, St. John, N.B., and Peterboro'. In Winnipeg the movement may be said to have met with defeat. While the newspaper offices yielded to the demands of the men without a murmur, a vigorous fight was put up by practically every job printer in the city, and over fifty men were brought out from England to take the place of the strikers. All offices are now reported to be running full-handed, and no further trouble is anticipated.

In St. John, N.B., and in Peterboro' the men finished out the year, the actual strike beginning January 1st. In the former city it is pointed out that only last July the men were granted a raise of \$2 per week on the nine hour basis in consideration of the increased cost of living, and that it is unreasonable for them to come back within a few months and ask for the same wages on an eight hour basis, which virtually amounts to a further increase of 12½ per cent. It is understood that an effort is being made to solve the difficulty by the same method that the Winnipeg printers used with such success. Developments in these two cities will be watched with interest.

Beginning with the first of the year, the storm centre of the eight hour movement shifts to New York, where so many of the big publishing houses are located. Both sides are apparently confident of success, and a long and bitter fight may be expected. The Union men, who are well organized, are credited with having \$500,000 to carry on the struggle. The employers on the other hand will be greatly strengthened by the fact that all the periodical houses, who have printing plants of their own have decided to stand by them. Many of these will be able to stand a long siege, for they have prepared for this trouble by printing their magazines three months in advance.

It is probable that one of the immediate results of the movement, so far as the printing trade is concerned, will be the more extensive employment of female labor, particularly on machine work. In Chicago there has been a marked tendency along this line since the printers' strike began, and the results from the masters' standpoint have been very satisfactory. Even in Canada female operators have made their appearance in a few shops. Those who have employed them state that they are quicker and more accurate than the men, and that they are far less disposed to make trouble.

WHERE WILL IT END?

The determined opposition which employers are making to the eight hour movement is not surprising in view of the uncertainty they feel as to where this movement is going to end.

It is not so long since the ten hour day was the rule in nearly all shops, and there are many who believe that we should still be working on that basis. When the agitation for a nine hour day began employers felt that they were confronted with a serious problem. Demands for increased wages they were accustomed to. To a certain extent these demands were justified by the increased cost of living, and must be met. But the demand for shorter hours complicated the labor situation, and opened up a new phase of the question. It involved a radical departure from the old order of

things, a departure which gave promise of greater difficulties in the future. The question was freely asked, "Will not the concession of a nine hour day be followed by an agitation for eight hours?" But Unionism said "No, give us nine hours and we are content." In response therefore to the almost universal demand, and expecting that the concession would go a long way towards promoting more harmonious relations, the employers finally yielded.

But scarcely has the corpse of the ten hour day grown cold before the Unions have expressed a desire to attend the funeral of its successor! The former concession has proven itself to have been but the thin edge of the wedge, and employers can hardly be blamed for opposing the further progress of a movement which threatens industry with destruction. They do well to ask themselves in all seriousness what guarantee they have that the movement will stop at eight hours, instead of nine. The reply of the Unions is consoling, though not satisfactory. They contend that an eight-hour day is what must ultimately come about in the natural order of things; that in fighting for it they are simply fighting the battle of Nature herself, who intended that man should have eight hours for work, eight hours for sleep, and eight hours for the various other occupations which constitute the daily round of life. They ridicule the suggestion that any further reductions will ever be asked for. And yet Labor Unions in Australia are to-day considering the question of a six hour day as a means of solving the unemployed problem!

Where will it end? This is the question to which employers desire an answer, and which must be settled before they will deal with the present demand.

FOREIGN TRADE NOTES.

A Visitor from Trinidad.

Mr. T. Geddes Grant, correspondent for the Canadian Manufacturers' Association at Port of Spain, Trinidad, writes from Halifax that he has just completed a very successful tour throughout Canada in the interests of trade between the Dominion and the West Indies. His last visit was made two years ago, when he came as a delegate to the Congress of Chambers of Commerce of the Empire, then meeting in Montreal. Mr. Grant has a business experience in Trinidad extending over twenty-one years. He has acquired in that time a very full knowledge of the trade, for he regularly makes visits to all the West India Islands and to Demerara. He has already secured good connections in fish, flour, lumber, oats and butter, but would be glad to hear from Canadian manufacturers in other lines desiring representation in that market.

German Aggressiveness vs. British Indifference.

The British Consul at Kieff, Russia, commenting upon the aggressiveness of the Germans who are doing business in that market, offers the British manufacturer some very timely suggestions, which the Canadian exporter would do well to profit by. "I am convinced," he writes, "that the success of Germany in Russia is mainly due to the willingness of her manufacturers to adapt their wares to the requirements of their Russian customers, and to a greater spirit of enterprise in dealing with the Russian trade than is shown by the British manufacturer. The fact that both Russia and Germany heavily tax the products of the other would seem to prove that protective tariffs are not barriers to international trading. Were such the case, one might reasonably think that the United Kingdom should account

for a larger proportion of the imports into Russia, seeing that Russian exports are, practically speaking, admitted into the United Kingdom duty free. The idea seems to prevail in the United Kingdom that what British manufacturing interests require is more technical education and more knowledge of foreign languages. No doubt both are pre-eminently useful, if not absolutely necessary, but if the true spirit of British enterprise be not forthcoming to push the trade of the country, little good will come either from technical education or from knowledge of foreign languages. It is hard to believe that either technical education or a perfect knowledge of the Russian language will ever induce a Russian buyer to habitually buy goods he knows he cannot sell."

Stationery in Cuba.

It is estimated that before long there will be a notable increase in the sale of all kinds of stationery articles, and more especially of the class of goods used in schools. Of the 300,000 children that are of an age to attend school, only about one-half that number do so. Since the island became a separate State, imports from the United States have shown a marked increase in all kinds of paper, printed and otherwise. The trade done with America in 1903 was estimated at \$150,000, but last year it had risen to \$315,000, consisting chiefly of the lithographic labels used in the packing of cigars. Germany and France also participate in this business.—*Das Handels Museum*.

Commercial Travellers in Brazil.

It is absolutely impossible to-day for any foreign commercial traveller or salesman to do any business in this city if, as is always the case, such salesman depends on samples, catalogues or anything else to assist him in explaining his business. The regulations affecting such salesmen have been equally hostile for a long time, but I have not hitherto reported on the matter, as the majority of travelling salesmen who have been coming here for some years, and with whom I have had conversations on the subject, informed me that they had found ways in which to avoid the hardships of these regulations, and suggested that the least possible public discussion of the matter would best suit their interests. The authorities, however, have not been blind, and have so perfected regulations that, except upon the payment of an enormous tax, agents can no longer do business. The avowed object of the regulations is to compel all foreigners desiring to do business in this State to appoint local native business agents to whom all goods shall be consigned, and who alone shall advertise and sell the goods. Incidentally, any foreign house still desirous of sending its own agents must pay heavy tribute for the privilege. The tax is \$426.11 American. Should the value of the paper milreis appreciate, the tax will proportionately increase.—*U. S. Consular Report*.

The Railway Tie Problem.

Evidence of the scarcity of railway ties continues to manifest itself. In a recent report upon the Trade of Mexico, British Consul Leay mentions this article as one in which Canada might do a large business in that country. Since Consul Leay prepared his report the Mexican Central Railway Co. has given a contract for 1,000,000 ties, to be delivered within three years, laid beside its track, for \$1.20 (Mexican) each. The same upward tendency is said to characterize the markets in Europe, Germany and Austria-Hungary being the principal countries thus far to feel the shortage. In the latter country prices have advanced from 5 to 10 per cent. in the last year.

TRADE ENQUIRIES.

NOTE.—For further information regarding any enquiry mentioned under this heading or the names of enquirers, apply by number to the Secretary, at Toronto.

- 167 **AGENCIES, Belfast, Ireland.**—A correspondent in Belfast, Ireland, desires to represent Canadian shippers of goods suitable for the English market, and is prepared to give some financial assistance in the way of advances on stock or as might be otherwise arranged.
- 168 **London, England.**—A correspondent in London, England, writes that he is opening an office for the sale of Canadian manufactures and products, and asks to be supplied with catalogues and price lists of all kinds of Canadian goods, suitable for the British market.
- 169 **Pretoria.**—A broker and general agent in Pretoria, South Africa, who has had sixteen years' experience in South African markets, is prepared to take up the agency of firms wishing to have their goods introduced in that market.
- 170 **Building Materials of all Kinds.**—A London, England, firm of manufacturers of roofing, underlining and hair felts, having a large connection with builders, merchants, iron mongers and engineers, are prepared to handle, in addition to their own output, other lines of builders' supplies. First class references will be furnished on request.
- 171 **Butter, Cheese, Hams, Bacon, Lard, Flour, Paper, Chairs and General Furniture.**—A wholesale manufacturers' importing agent in Gibraltar is desirous of taking up agencies or is prepared to buy on his own account the above lines of goods. He sends as references banks in Gibraltar and in London, and also the local consuls.
- 172 **Cuttings (Fur) and Common Wadding.**—A company carrying on the business of wholesale animal waste dealers, established in London, England, since 1895, desire to purchase the above articles in large quantities. They ask for quotations delivered London. Payments will be made cash on delivery, and references provided on request.
- 173 **Doors.**—A large real estate agent and contractor in Glasgow, Scotland, is desirous of obtaining price of doors, 7 ft. x 2 ft. 10 in., made of British Columbian cedar with cotton-wood panels, finished complete, ready for hanging—but without hardware—in lots of 4,000 c.i.f. at Glasgow.
- 174 **Feeds, (Poultry).**—A general importer established in the wholesale business in 1904 in Jersey, England, desires to purchase poultry feeds in 5 to 10 ton lots. He asks for quotations f.o.b. Plymouth. Methods of payment will be arranged through the Capital and County Bank, Jersey.
- 175 **Glucose, Starches, Gluten Foods, Corn Oil, Corn Flour, Wheat Flour, Confectionery, Hay, General Groceries, Wall Papers, Office Furniture.**—A correspondent in London, who has had six years' experience representing important United States houses, is about to start in business on his own account and is prepared to represent Canadian manufacturers, either on a commission or a salary basis. He is satisfied that he can do business in all the lines above mentioned. He forwards a number of references.
- 176 **Handles, (Pick and Shovel).**—A firm of Sheffield manufacturers invite samples and prices of wooden pick and shovel handles.
- 177 **Leather.**—A large South African firm desires samples and c.i.f. quotations of Canadian oak tanned sole leather.
- 178 **Lumber.**—A London importing firm wish to be placed in communication with a reliable firm of lumber dealers in Canada who can supply good sound square cut timber $\frac{1}{2}$ " to 6" in beech, birch, maple, etc., c.i.f., London.
- 179 **Lumber, Soap, Leather, Cheese, Canned Fruits, Organs, Office Furniture, Flour, Jewelry, Pork and Provisions.**—A manufacturers' agent, indent and commission merchant in Durban, Natal, is desirous of securing the appointment as agent for manufacturers of the above lines of goods. He states that preferential tariff together with an unquestionably strong desire in favor of trade with Canada will be a great assistance. He is well established and in daily touch with leading importers. He has had four and a half years' experience in South African business, having for a time made official trade reports to one of the Colonial Governments.
- 180 **Meat and Fish, Condensed Milk, Canned Fruits and Vegetables, Dried Fruits and Vegetables.** A London, England, firm, already representing one Canadian exporter, has a connection among the principal firms in London for placing the above goods. At present they are not able to obtain supplies. They forward Canadian references.
- 181 **Paper.**—The principal of a large company dealing in wool, grain, produce seeds, etc., in Dunedin, N. Z., and who has recently visited Canada, is desirous of handling the produce of a paper mill manufacturing news.
- 182 **Presses (Pulp).**—A manufacturers' agent in London, England, who is establishing a business on his own account, asks for quotations on wet pulp presses delivered in England. A number of references are forwarded.
- 183 **Rubber (Raw).**—A Liverpool company favorably known to the Association for some time, ask to have their name put before the rubber manufacturers of Canada as being able to supply raw rubber for manufacturing purposes. They have been connected with the Mincing Lane and Liverpool market for the past 18 years, and request correspondence.
- 184 **Sugar and Syrup, (Maple)**—A Bristolian wants agencies for Canadian firms producing the above.
- 185 **Tallow.**—A Manchester company wishes to be placed in touch with Canadian producers or shippers of tallow who wish to take up an export trade.
- 186 **Wax, (Paraffin).**—Correspondents of the Association in Liverpool, are desirous of acting as agents for the sale of paraffin wax. They are in direct communication with the largest consumers of the country.
- 187 **Wheelbarrows.**—A hardware manufacturers' agent in London, England, well known to the Association, is desirous of acting as the London representative of Canadians firms manufacturing wheelbarrows for the export trade. He has facilities for handling the business, which he would conduct on a commission basis.

AMONG THE INDUSTRIES

During the present winter the Dominion Iron and Steel Co. will probably enlarge their plant at Sydney, Cape Breton, by the addition of two Bessemer converters, which will increase their productive capacity nearly 50 per cent.

The Dominion Brewery, occupying large buildings and grounds on Queen Street East, Toronto, has recently changed hands. Local capitalists are said to be the purchasers. The price paid was \$375,000.

The Spramotor Company, of London, write that they have received a report of the results of official tests made of their apparatus in the tea gardens in Asia, in which the savings with their machines were 100 per cent. Double the amount of acreage was covered.

It is said that nearly \$700,000 will be spent by the Grand Trunk Railway in equipping the Sarnia tunnel with electric power on the third rail system. The erection of power houses, both at Sarnia and Port Huron, would form a necessary part of the work.

A new company known as the Revelstoke Sawmill Co. has been organized with a capital of \$500,000 to continue on a larger scale the business of the Revelstoke Lumber Company which it has purchased. The construction of a new mill has been almost completed.

It is reported that a copper smelter will be established at Bruce Mines, Ontario, to treat the ores from that property recently purchased from the English Syndicate. The development of the mine will be actively pushed and an output of 500 tons of copper per day is aimed at.

Dr. John D. Wilson, of London, together with Messrs. B. Britten and R. B. White, of Stratford, will build a \$125,000 abattoir just outside the city limits. They expect their industry to employ from 50 to 75 men, and are asking the city for free fire protection and free sewer connections.

The Canadian Aluminum Works, Ltd., Chambly Canton, Que., who were the first firm in the world to manufacture combination gas and electric fixtures from aluminum, will branch out on the first of the year into the manufacture of aluminum advertising novelties of all kinds.

Extensive additions to the works of the Canadian Rand Drill Company, at Sherbrooke, Que., will shortly be undertaken to meet the call for their specialties in compressed air machinery. A new foundry, it is understood, is among the improvements to be carried through.

Mr. Simeon Brubacher has purchased a site in the town of Berlin upon which he proposes erecting a large and modernly equipped lumber and planing mill. The machinery will be supplied by Messrs. Jackson & Cochrane of the same town.

The Henry K. Wampole Company, manufacturing chemists, transplanted their entire establishment from Toronto to Perth by means of two special trains on December 16th. Twenty-eight freight cars were needed for their stock and equipment, the staff of 176 hands following later in a passenger special.

Vancouver capitalists are considering the advisability of establishing an industry at Nanaimo to cure herring. Practical instruction is now being given to the people of that section by Scotch experts, who pronounce the fish of fine flavor and quality, fully equal to Scotch and Norwegian brands.

Mr. J. S. Emerson, of the Nanaimo Lumber Co., has purchased several acres of water frontage at Port Moody, B.C., and will proceed at once with the erection of a two-story sawmill and shingle mill. The proposed capacity is 40,000 feet of lumber per day with four machines in the shingle mill.

Messrs. Geo. E. Drummond and J. T. McCall, of Montreal, have been instrumental in forming a company known as the Corrugated Steel Bar Co. of Canada, Ltd., whose capital is placed at \$50,000. This company will acquire patents relating to corrugated bars and will manufacture and deal in same.

The A. M. Forbes Hardware Co., of Vancouver, is spending \$50,000 on a new factory in that city, which will manufacture cans and sheet metal goods of all kinds. The new plant will be the only one of its kind in the province, and it is expected that when in full operation it will employ about 100 men.

The Mount Forest Carriage Co., Ltd., have purchased the business heretofore carried on under the name of the Palmerston Carriage Co., Ltd. They have acquired all the patents and improvements made by the late company, and have retained the entire staff, so that the business will be carried on without any interruption.

The Board of Trade of St. John, N.B., are actively interesting themselves in securing new industries for that city. After a lengthy discussion they recently passed a resolution in favor of ten years' exemption for new concerns, and hope thereby to secure some of the United States branch plants being established in Canada.

The season's run at the Raymond (Alberta) beet sugar factory closed with a record of 18,000 tons of beets cut, and 4,800,000 pounds of refined sugar produced. The quality was well sustained throughout, and the demand greater than ever before. Next year the company expect to have a considerably larger acreage under cultivation, using only irrigated land.

A fine new box factory is practically assured for the city of Stratford, Ontario. It will be a building of brick, stone and concrete, 240 x 67 feet and two stories in height, and when in full operation will provide employment for fifty hands. Mr. David Gilchrist of Toronto is interested in the company promoting the enterprise, which is capitalized at \$100,000.

According to the Nelson Daily News the biggest lead smelting furnace in the world is being manufactured in that city by the Kootenay Engineering Works. It has been ordered for the Canadian Reduction Works at Trail. Already the company has several large furnaces probably equal or nearly equal in size to any in use anywhere. The new one will be half as big again as any now in operation at Trail.

Mr. W. H. Richardson, late of Brighouse, Yorkshire, whose works at "Brookfoot" were long celebrated for the excellence of their all wool goods and creams, has become a shareholder in The Merchants Dyeing and Finishing Co., of Toronto, and will henceforth devote himself exclusively to the service of that company. With his expert knowledge to assist them, they believe that they will not have to play second fiddle either to Britain or to the continent.

The new mill of The Western Canada Flour Mills Company, who are already established at Brandon, Man., and Goderich, Ont., will be erected in St. Boniface, across the river from Winnipeg. It will have a capacity of 4,000 bbls. per day, and will therefore be one of the largest in the country. Allis-Chalmers-Bullock, Ltd., Montreal, are supplying the electrical equipment, and the Chapman Double Ball Bearing Co., Toronto, the transmission.

The new plant of the Ogilvie Flour Mills Company, now nearing completion at Fort William, will have a daily capacity of 5,000 barrels of flour, though at present machinery is being installed for 3,000 only. Adjoining it is a large steel fireproof elevator with a storage capacity of 600,000 bushels of wheat, besides a flour storage warehouse of 125,000 barrel capacity. The plant will be operated by electricity, transmitted from the Kakabeka Falls, where extensive development work is now going on.

A new industry has been started at Port Arthur which promises extensive developments. A \$50,000 company has been formed to fatten sheep both for home and foreign consumption. They will be fed chiefly on screenings from the large elevators at that point and at Fort William, which it is said can be purchased at from \$4 to \$5 per ton. Some 3,000 sheep have now been received, but it is the intention to increase the number to about 8,000 should the business warrant it.

One of Mackenzie & Mann's latest schemes in connection with their transcontinental line is said to be the placing of a fleet of ice-breaking ferries on Lake Superior. The proposal is to operate them between Port Arthur and Batchawana Bay, about 30 miles north of the Soo, which could easily be connected by the construction of a very few miles of track with the Manitoulin and North Shore Railway. This would give them access to Sudbury and the eastern section

of their own line, affording a through route from Edmonton to Toronto.

A new Singer sewing-machine factory at St. John's, P.Q., is now nearly completed, and represents an outlay of about \$1,000,000. The plant covers 45 acres and has 18 separate buildings, all of modern steel construction and fireproof. They include a cabinet building, a log boiling building, veneer cutting shop, veneer drying plant, foundry, machine shop, forge and japanning buildings, oil house, shipping building and main office. The entire plant is covered by a railroad system of three and a half miles, connecting all departments and operated by an overhead trolley.

The plant of the Vancouver Portland Cement Co., near Victoria, B.C., is to be enlarged so as to bring the capacity up to 1,200 barrels a day. Since the establishment of these works foreign cement has been almost entirely displaced in British Columbia, and the men behind the enterprise are looking forward to a busy season next year. They have organized another company to operate in Calgary, known as the Alberta Portland Cement Company, and expect to have everything in readiness to begin manufacturing next summer. The projected capacity of this plant will be 1,800 barrels a day.

SITUATION WANTED AS ENGINEER.

A thoroughly competent Certificated Engineer, who has had 25 years experience in responsible positions, desires to locate in Eastern Canada. In addition to Marine and Stationary Engineering, he has good practical knowledge of Electrical, Hydraulic and Refrigerating Engineering, and has been in charge of large plants of above machinery.

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Canadian United Manufacturers' Agency.

Mr. Herbert Rodgers, senior member of the firm of Herbert Rodgers & Co., Saracen House, Snow Hill, London, E.C., who already represent a number of Canadian machinery and hardware manufacturers in England, is coming to Canada in March in order to secure further agencies for Great Britain. Mr. Rodgers proposes to form what will be known as the "Canadian United Manufacturers' Agency" for the direct representation of Canadian Manufacturers in the British Isles, including, however, only such manufacturers as shall be unanimously agreed to by all others whose representation is already in the hands of the agency. The lines along which Mr. Rodgers proposes to work should combine the advantages of economical and efficient representation with sound financial supervision. Canadians desiring to meet him should communicate with the Secretary, Canadian Manufacturers' Association, Toronto.

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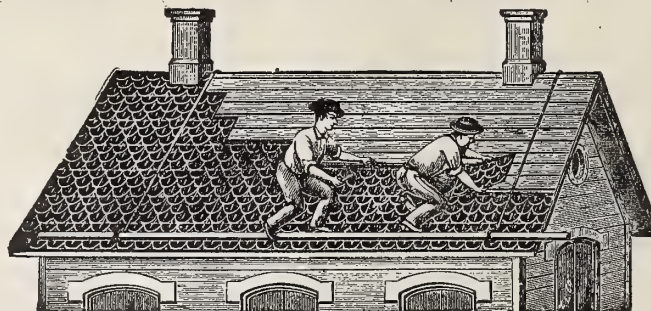
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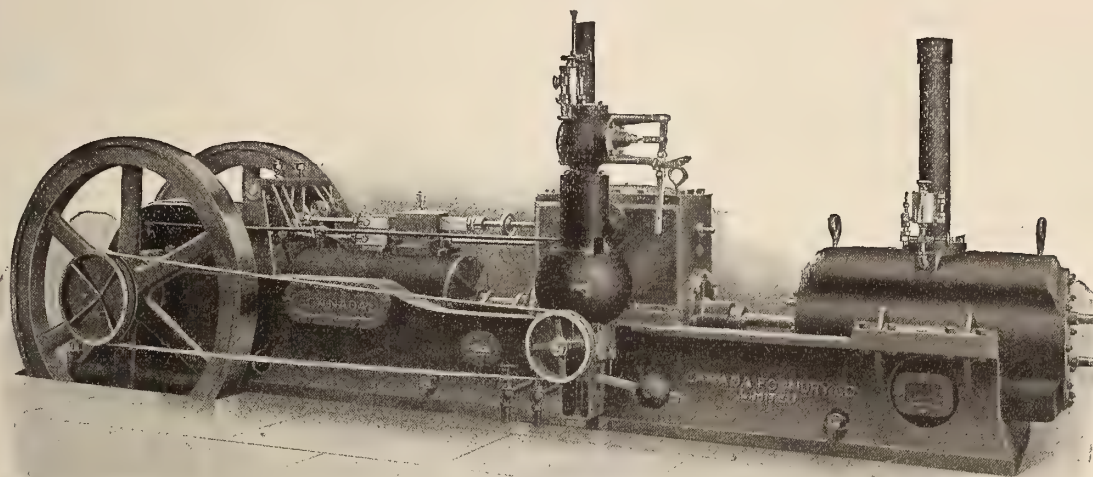
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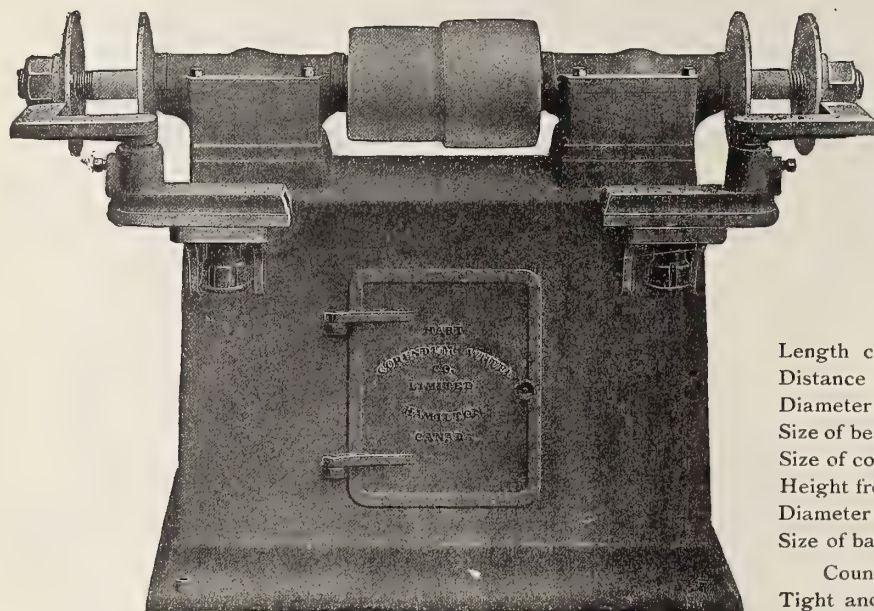
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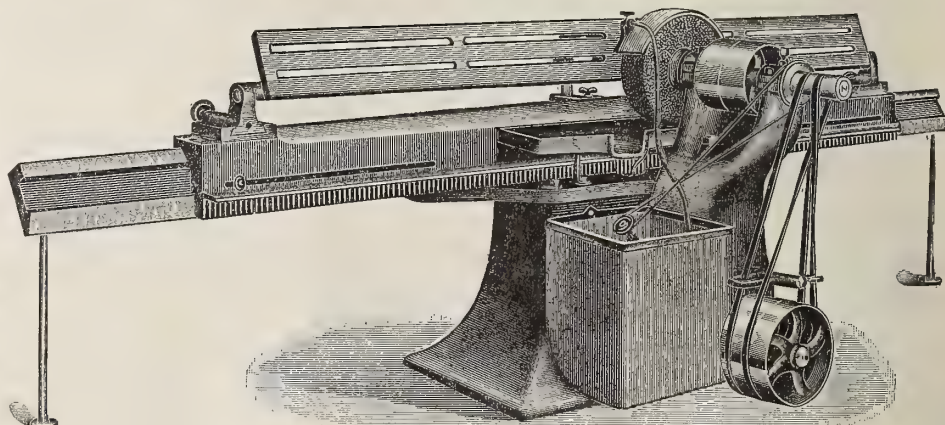
To carry 2 wheels 20 to 30 in.
diameter, 4 in thick.

Length crucible steel arbor.....	57 inches
Distance between wheels.....	45 "
Diameter of arbor between collars	2 "
Size of bearings.....	12x2 1/16 "
Size of cone pulley on arbor....	8 and 9x6 1/2 "
Height from floor to centre of arbor....	34 "
Diameter of collar	10 "
Size of base	31x41 "

Countershaft has cone pulleys 17 and 18x6 1/2.
Tight and loose pulleys 8 in. diameter, 7 in. face.
Should run 450 revolutions per minute.

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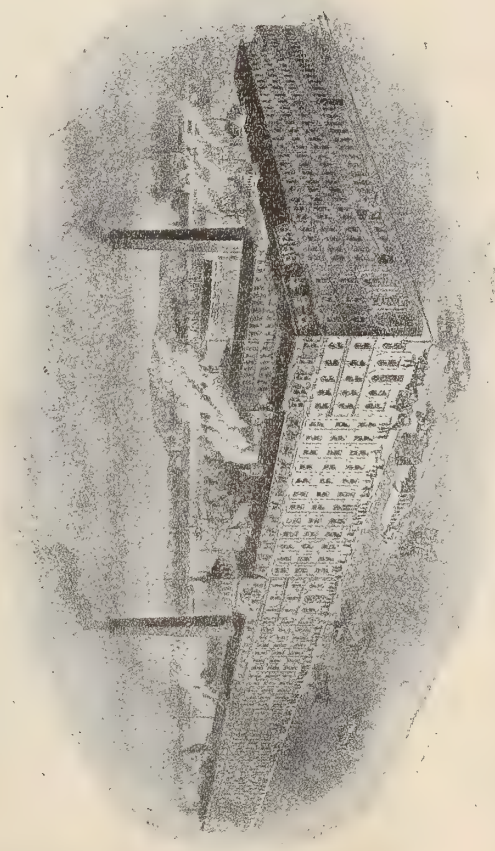


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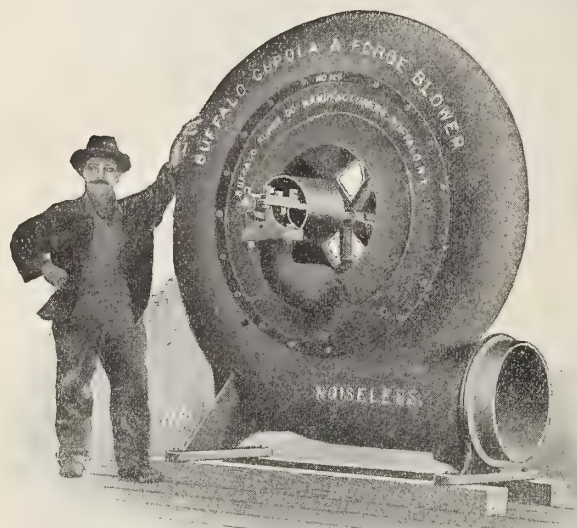
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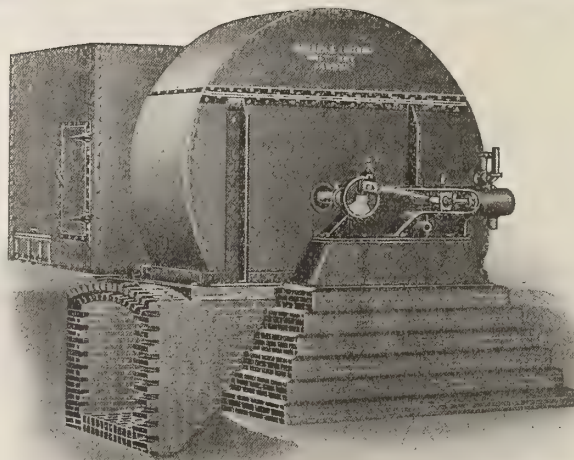
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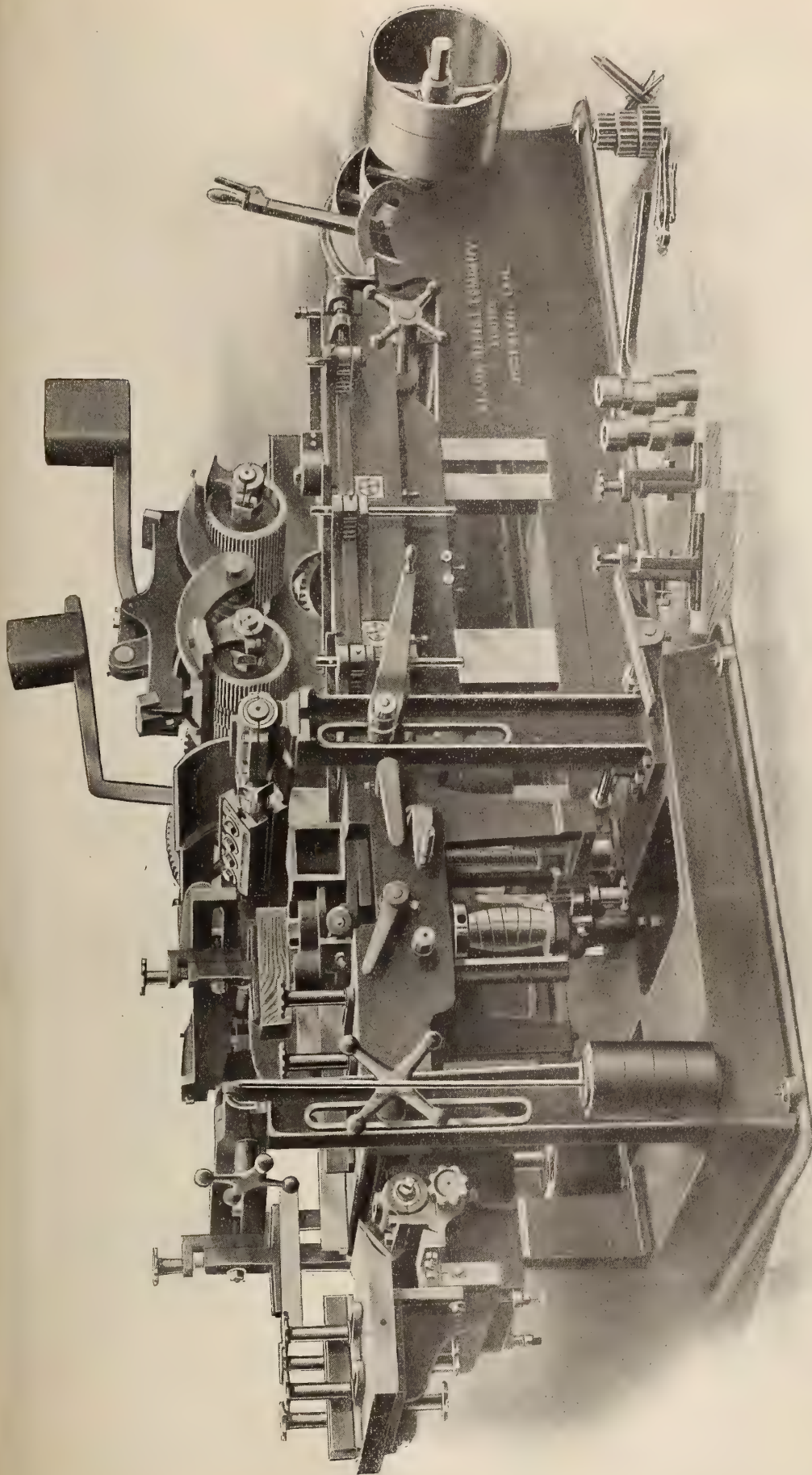
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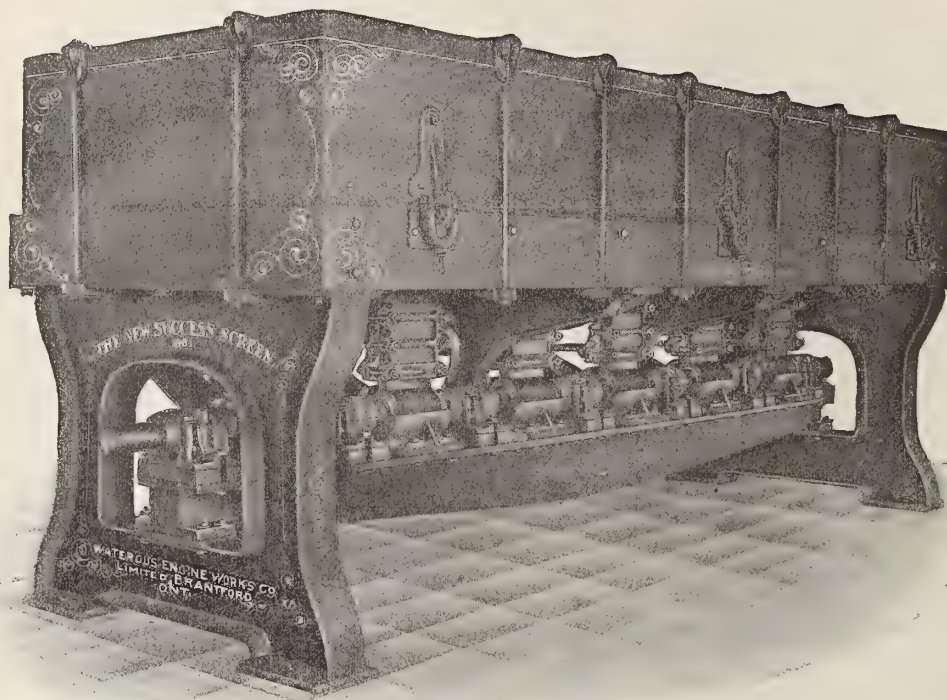
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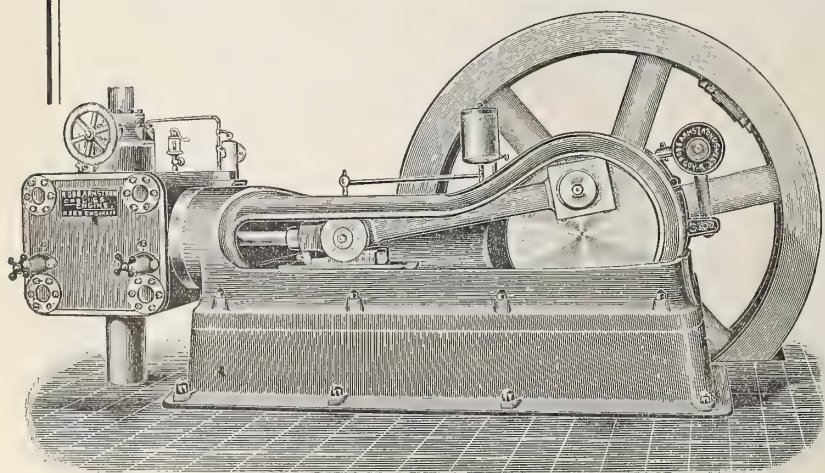
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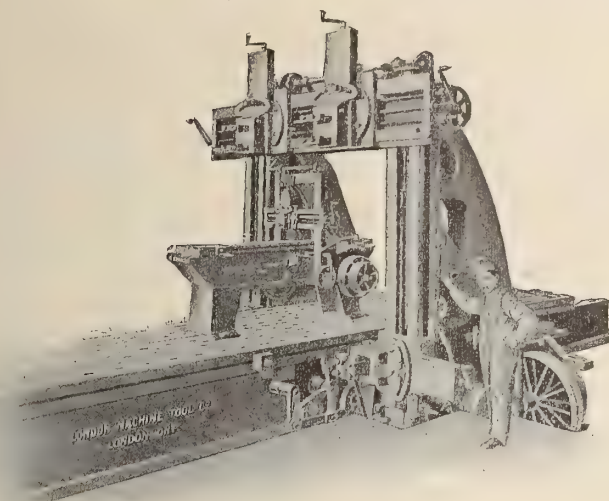
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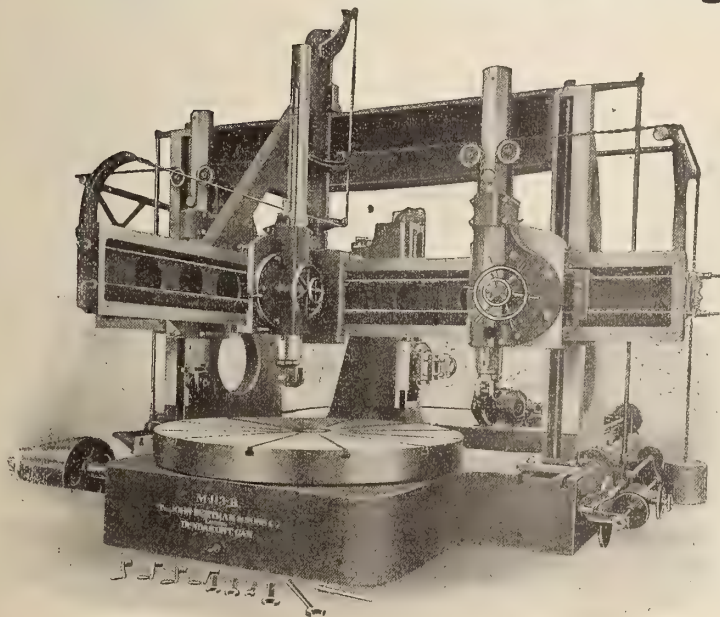
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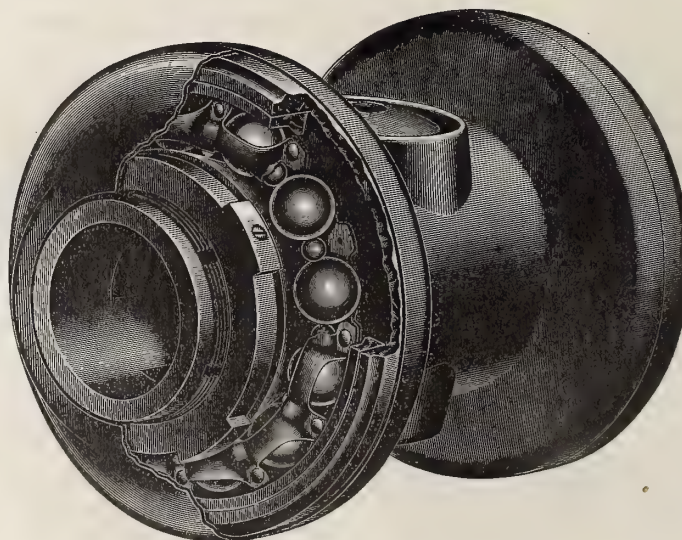
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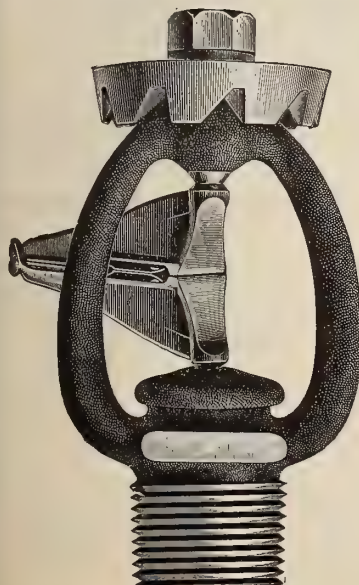
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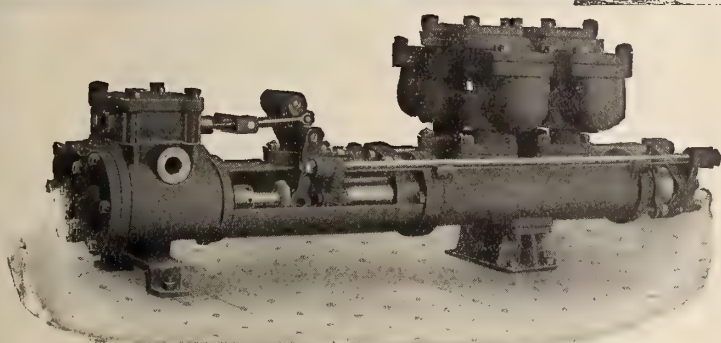
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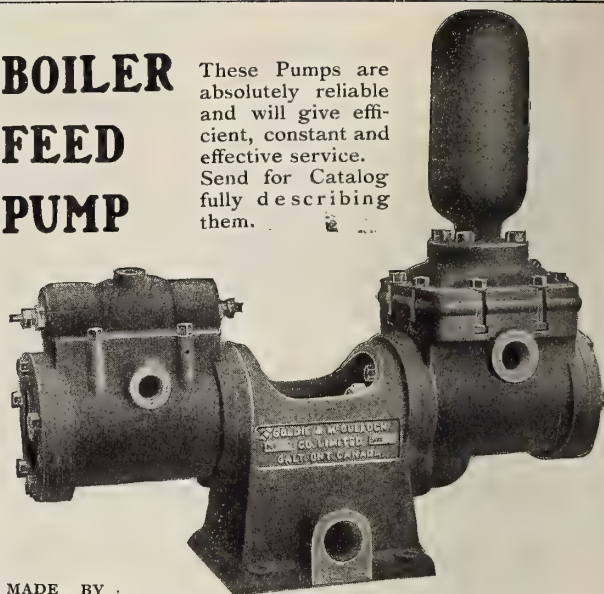
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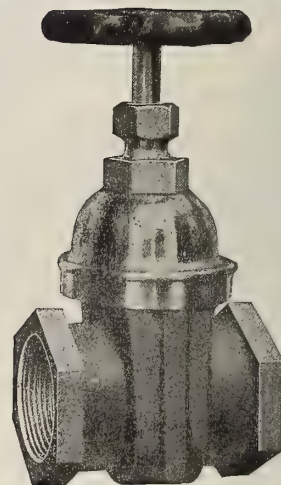
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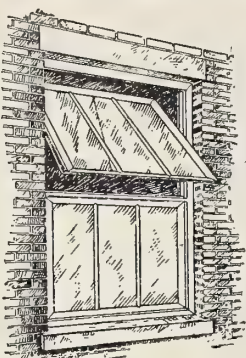
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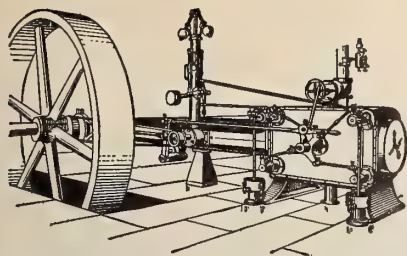
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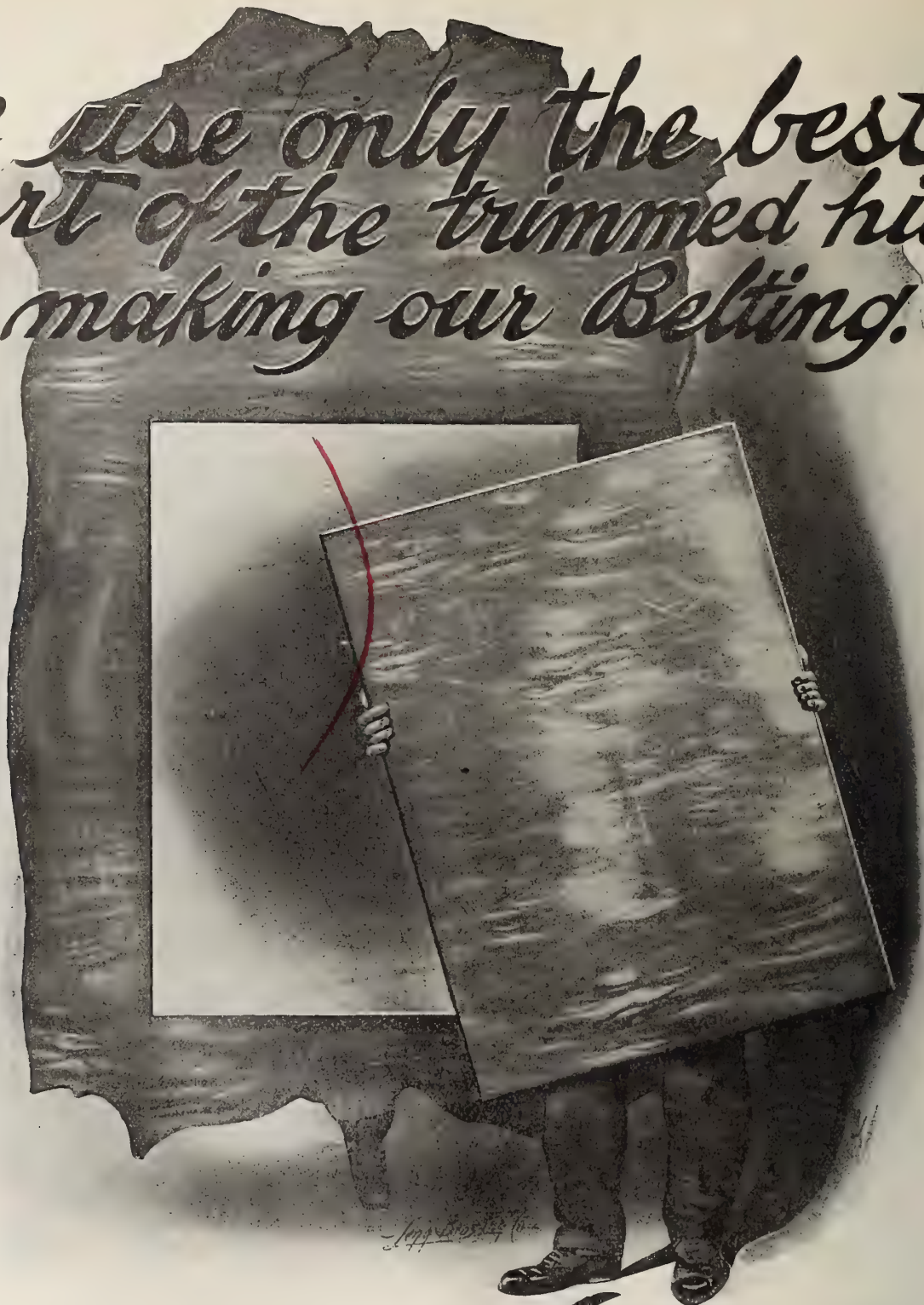
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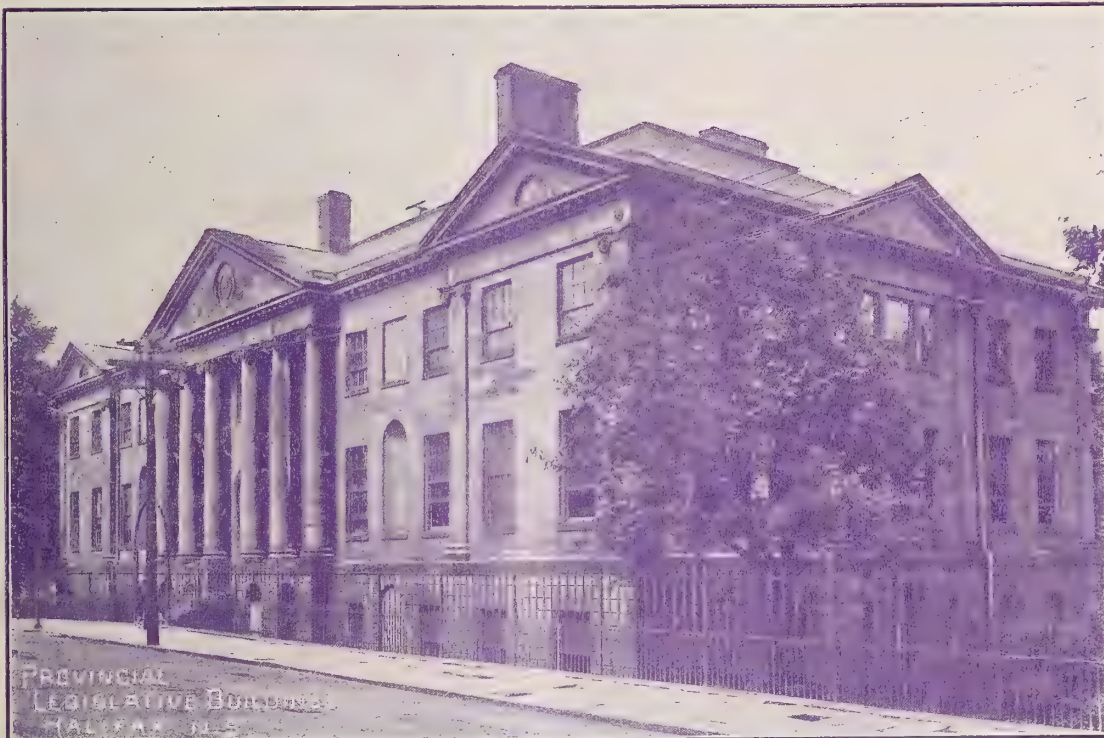
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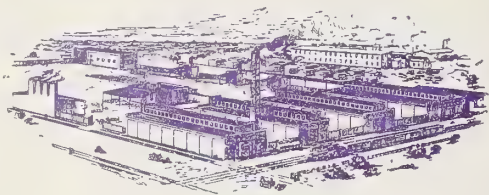
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
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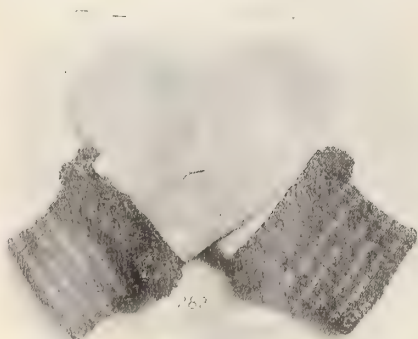
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Vol. VI.

TORONTO, FEBRUARY, 1906.

No. 7.

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Issued monthly as the official publication of the Canadian Manufacturers' Association (Incorporated), and devoted to the advancement of the industrial and commercial prosperity of Canada.

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THE BRITISH ELECTIONS.

SUFFICIENT returns have come to hand to show that the Liberals have won the British Elections, and have swept into power with an enormous majority. Such complete reverses in British politics are not as phenomenal as in Canada, and in this case, are not surprising to anyone. So far as the returns themselves are concerned, the Canadian Associated Press has supplied an excellent service, yet the Canadian public are almost totally ignorant of the proportions in which the various important issues have contributed to the Liberal majority. Whether the defeat of the late Government is due to its educational policy, to the alleged mismanagement in the War Department, to the introduction of Chinese labor into South Africa, whether the tariff issue has bulked large in the results, or to what extent all of these have influenced the situation, are not known to the Canadian public.

The position taken by the Canadian Manufacturers' Association has always been that Great Britain must settle her own political issues without any interference from other portions of the Empire. The introduction of the imperial fiscal problem, however, concerns every subject of the Empire, and while the Canadian people have not intruded upon what must be admitted to be a delicate question, they have watch-

ed with keen interest the progress and outcome of the campaign. For this reason it is regrettable that we are not more fully informed as to the exact causes of the Government's downfall.

Whether the new Liberal administration will adopt imperial measures looking towards closer unity in the Empire remains to be seen. It is possible, however, that while they scrupulously avoid any semblance of imperial tariff measures, they may establish either an Advisory Council composed of representatives from all the British Dominions, or an Imperial Intelligence Department for the uniform and closer development of the political, civil, and commercial business of the Empire. It would seem that the time is ripe for the consummation of both these plans, and they may both be carried out in the near future.

One thing is certain, however—that whatever steps are taken towards closer imperial unity, it is the duty of the motherland to take the first step, and this must be considered one of the responsibilities to be borne by the new Government. As Sir Frederick Pollock has so well said in his recent article on Imperialism and Canadian Opinion, "It is useless for us to sit still in London and await proposals from the colonies, if only because there are no means by which the several Governments could frame any definite or unanimous request. Our cabinet at home is the only body which, being at the centre of imperial affairs, and commanding all the material information, is capable of taking the first step."

Canada has spoken through her preferential tariff. She now awaits, with all the other self-governing states within the Empire, the answer of the mother country. If the fiscal issue has played a sufficiently important part in the British elections to warrant the new administration in initiating an imperial policy, this great question will undoubtedly receive immediate attention, and the announcement of that policy will be awaited with keen interest throughout Canada.

ROYAL COMMISSION TO INVESTIGATE FIRE INSURANCE CONDITIONS IN CANADA.

REFERENCE to the report of the Insurance Committee of the Canadian Manufacturers' Association, as recorded in the proceedings of the last meeting of the Executive Council, will attract attention by reason of the resolution, unanimously adopted, calling upon the Dominion Government to appoint a Royal Commission, clothed with the fullest powers, to investigate fire insurance conditions in Canada. In adopting this resolution it is not

to be supposed that the Association is necessarily actuated by motives antagonistic to the insurance companies, but all who have followed the trend of provincial legislation and are seized of a full knowledge of prevailing conditions will recognize that much of advantage to both insurer and insured may be expected to accrue from the work of the proposed Commission.

Every burden imposed by provincial governments upon insurance companies must necessarily re-act upon the policy-holders; there is no doubt of the attitude taken by the companies in this regard, and in the Province of Quebec particularly this is evidenced by a specific additional rate on all risks to cover the local government tax. It is not, however, so much taxation as it is other provincial requirements that might well form the subject of extended federal control. The Insurance Act of Canada provides for the organization of native companies and the licensing of foreign corporations entitling these concerns under well-defined provisions to transact business throughout the Dominion. The provinces in their turn have made provision for the organization of local companies whose jurisdiction is limited to the province in which they are organized, but the policies of all companies, whether of Dominion, provincial or foreign organization, are subject to conditions prescribed by the local legislatures. If the Dominion Government has the right to incorporate or license insurance corporations to do business throughout Canada, have they not the right to impose a statutory policy upon the companies so licensed by themselves? It is, we believe, a somewhat doubtful legal question whether the Dominion Government has this right or not; it is surely in the public interest to determine this question, and if the right exists it is unquestionable but that public considerations demand that the right should be exercised.

It is probably not taking too much for granted when we say that on either or both of the above grounds the insurance companies would probably heartily support the petition of the Association for the appointment of a Royal Commission.

In justification of the continuous and ever-increasing advance in fire insurance rates the companies have pleaded the unprofitableness of the Canadian business. Assuming this to be true, is a continuous increase of rates the only way to meet the situation? It may be the safest and easiest way from the companies' standpoint, but the increasing burden of taxation and of the fire waste of the country are matters that seriously affect the people at large, and they have some rights that should be considered and respected.

Possibly also such a Royal Commission as we have asked for might include in the scope of its enquiry the extent to which the licensed companies are reinsuring with unlicensed companies; and if they could secure returns that would show the *actual* results of the Canadian business to the companies or head offices they *might* establish, even to the satisfaction of the disgruntled policy-holders, that the oft-repeated excuse for increased rates is really justified.

In recent years there has been more discord and greater distrust between the fire insurance companies and the insured generally than probably in any other mutual relationship in the commercial world, and anything that will contribute to establish the two in positions of confidence and amity must be accepted with gladness. A Royal Commission such as we have asked for, and which we believe to be in the interests of insurer and insured must have a far-reaching, beneficial effect, and it is, therefore, to be hoped that the Government will accede to the petition without any delay.

THE FORESTRY CONVENTION.

FEW conventions have ever been held in Canada for the discussion of matters relating to our national welfare that have been productive of more real and lasting good than the one called by Sir Wilfrid Laurier to meet in Ottawa under the auspices of the Canadian Forestry Association.

To one who had previously given little thought to the question of forest preservation, the report of the proceedings must have come as a revelation indeed. Wood constitutes the raw material for so many manufacturing industries, and is used in such tremendous quantities in the building trades, in railroad construction, and in mining, that the conservation of a perpetual supply becomes a matter of the utmost importance to the future industrial development of Canada. But it is when we come to consider the far-reaching influence of forests on other phases of industrial activity, the part they play in regulating the flow of rivers and maintaining the stability of water-powers, in inducing a sufficient fall of rain, in modifying extremes of climate, and above all in promoting the success of agriculture, it is then that the importance of this subject looms up in such proportions as almost to stagger the imagination.

Heretofore the public have failed to give the matter the consideration it deserved, partly through ignorance of its tremendous importance, and partly through a feeling of security in what has been only too commonly regarded as the inexhaustible forest wealth of Canada. A recent estimate of the timber supply in Quebec alone places the figures for soft wood logs at 155,000,000,000 feet, for hardwood logs at 21,000,000,000 feet, for pulpwood at 745,000,000 cords, besides 730,000,000 railroad ties, and wood suited only for shingles and fence posts. Add to this the forest wealth of the Maritime Provinces, of Northern Ontario, of the Pacific Slope, of the Saskatchewan Valley, and the Far North, and it is little wonder that Canadians have given little thought to the future, and have proceeded to dispose of their heritage with reckless prodigality. We have been prone to defer any discussion of the husbanding of those resources as something remotely affecting the welfare of generations yet to come, and to take comfort in the reflection that there is ample to supply our own needs and those of our children, besides meeting the drafts which the United States is making on us from year to year. And yet, as Senator Edwards explained in Ottawa, with all our 532,000,000,000 feet of standing timber, we could only supply the wants of the United States—at their present rate of consumption—for eleven years, and their woodlot is vastly nearer exhaustion than ours!

The situation confronting us is really a serious one. Magnificent as is the forest heritage with which Nature has endowed us, we are consuming it at a more rapid rate than we think. By extravagant methods of lumbering, by the neglect to remove debris from pulpwood slashings, by the reckless clearing of the land for agricultural purposes, and by the disastrous fires which follow in the wake of settlers, sportsmen, and railroads, many of our richest areas are being denuded of forest growth. Frequently the land so cleared is useless for other purposes. We are steadily drawing on our capital account. The time has come when we should make an earnest effort to live on our interest. It has been demonstrated on a commercial scale that a handsome annuity, in the shape of new timber crops, can be ensured for only a small expenditure of time and money. Such being the case, it is little less than criminal for us to go on

squandering resources of which we should regard ourselves as simply the custodians.

All things considered, the time now seems ripe for the adoption of a vigorous forest policy for Canada. And there is reason to believe that the matter will receive early consideration, not only by the provincial legislatures, but also by the Government at Ottawa. The almost constant attendance of His Excellency Earl Grey, Sir Wilfrid Laurier, several cabinet ministers, and representatives from the various forestry bureaus of the provinces, and of the Department of Interior, indicates a degree of interest in official circles that should be extremely favorable to the plans of the Forestry Association, and with public sentiment strongly behind them that body should easily be able to have legislation enacted which would work towards the commendable end of conservating one of our most valuable assets.

THE PRICE OF HOGS.

FROM the continued discussion of the hog problem it has become more and more apparent that the real motive which prompted the farmers to ask for the cancellation of the bonding privilege was to compel the packer to pay a higher price for his raw material. The other objections have resolved themselves into mere nothings as compared with this one grievance of price. The *Toronto Globe* strikes the keynote to the situation when it criticizes INDUSTRIAL CANADA for ignoring "the claim of the hog-raisers to compensation for the cost of encouraging all other industries. The excluding of American hogs," it goes on to say, "will for a time at least make a demand for Canadian hogs, the Canadian packers having their machinery to use and their market to supply; but the supply of hogs cannot respond to any sudden demand, and Canadian hog-raisers may enjoy some temporary compensation for the unsatisfactory conditions to which they have been subjected."

INDUSTRIAL CANADA does not wish to deny for one moment the right of the hog-raisers to share in the general advantages of protection. We are rather inclined to rejoice that the farmers are at length beginning to admit that protection can be of some practical benefit to them. But we fail to understand wherein they will derive any compensation from the present situation when they have practically no hogs to sell.

We firmly believe, like the beet-growers at Berlin, that "Canada's greatest prosperity is coming when the farm and the manufactory join hands, grow up together, the one finding the food and the other finding the market." Mutuality is essential to the success of protection's cause. It is mutuality that has made the hog industry what it is to-day. It is mutuality that has raised the price of Canadian hogs from \$3.96 in 1896 to \$7 in 1906. Both the Government and the packers have taken infinite pains to educate the farmer in the science of hog-raising. Without the packer the Canadian hog-raiser would still be grovelling in the ignorance of a quarter of a century ago. The hog-raiser by way of return has until recently kept steady pace with the growing requirements of the packer, and has enabled him to take advantage of an expanding market by increasing the supply of raw material. This has naturally involved the erection of larger and better slaughter and curing houses, themselves a guarantee that the growing output of hogs would be adequately taken care of.

But every industry is bound to have its periods of depression, and the hog industry is no exception to the rule. The price the packer pays for hogs to-day is determined by

what he expects to be able to get for the finished product in England six weeks hence. The English market in turn fluctuates with the varying quantities of Irish, Danish and United States bacon with which it is supplied, also with the varying quantities of other meats which to some extent may temporarily displace bacon. Any decrease in the price of bacon must necessarily find immediate reflection in the Canadian hog market. If the farmer were wise he would accept his losses philosophically, just as the packer does when he finds that he has over-estimated the strength of the English market. Instead of doing so, however, he adopts the short-sighted policy of disposing of his brood sows, and when the inevitable recovery begins he is not in a position to profit by it.

The excluding of United States hogs cannot strengthen the demand for Canadian hogs, any more than a shortage in the bean crop can strengthen the demand for peas for canning purposes. Both are articles of food, and are prepared by the same machinery—the same may be said of beans and peas—but there all similarity ceases. United States bacon is an entirely different article from Canadian bacon, and can only compete with it indirectly as one kind of meat does with another. It makes no difference where it may have been cured, it ultimately finds its way to England in any event, to be sold at the same price as bacon cured in Chicago. The existence or non-existence of the bonding privilege does not affect the English market; it therefore can in no wise affect the price of live hogs in Canada. But it does affect the prosperity of the Canadian packer, and indirectly of the Canadian hog-raiser, if Canadian plants are to lie idle three days out of six, and work only to half their capacity for the remaining three days.

PURCHASERS' EXCURSIONS.

FOR some time past an agitation has been carried on by manufacturers and wholesalers for the establishment throughout Canada of what might be called purchasers' excursions. The idea first took shape a little over a year ago, when the Toronto Branch of the Canadian Manufacturers' Association, acting in conjunction with the Toronto Board of Trade, endeavored to inaugurate a so-called Traders' Week as a purely local institution. The idea at that time was to set apart a certain week every spring, and perhaps a week every autumn were it found desirable, when all wholesalers and jobbers would make it a point of being "at home" to their country customers. Retailers would be invited from all over Canada to visit the city during that week, to meet personally the men from whom they were buying, to make their selections from full stocks, and perhaps also to be entertained.

One essential to the success of the undertaking was a greatly reduced railway fare, and representations were accordingly made to the railway companies with that end in view, but the companies very properly pointed out that what Toronto asked for would be immediately demanded by every other buying centre in the country, and on that ground the application was refused.

The proposal, however, seemed to offer too many advantages, both from the buyer's and the seller's point of view, to be allowed to drop quietly out of sight, so that it is not surprising to find the movement again coming to a head, this time along broader and more generally acceptable lines. Two courses of action have been suggested, one hingeing upon the question of a reduced railway rate, the other depending for its success upon local organizations of sellers.

The first is simply the old Traders' Week idea extended so as to apply to every wholesale centre in Canada. Under this arrangement a retailer in Port Arthur might visit Winnipeg, Montreal, Toronto or any other jobbing centre during a given week in every spring at considerably less than single fare, and at a time when he would be sure of receiving the best of attention from the house with which he was doing business. Those who advocate this plan are hopeful of convincing railways that it would be feasible by reason of the increased travel it would stimulate, and the increased volume of freight traffic likely to follow from such visits.

The second means that has been suggested of accomplishing the desired result is to work on the same lines that are followed by associations of wholesalers and manufacturers in Buffalo and Grand Rapids. In these cities organizations have been formed for the purpose of encouraging visits from retail buyers. No concessions are asked from the railways, the members of the association undertaking to defray the travelling expenses of any buyer providing his purchases reach a certain figure. To this end a common fund has been established to which each member contributes a minimum fee of say \$50. The buyer on reaching the city is provided with a list of all those in the association, together with a card for registering the amount of his purchases from each. These are duly certified to at the various warehouses visited, and afterwards totalled up at the central bureau. If the buyer has come a distance of 25 miles his fare is refunded providing he has purchased goods to the total value of say \$100, each member's account being debited with its proper proportion of the expense. If the distance travelled be 50 miles, purchases to the extent of say \$200 are demanded, and similarly for longer distances. This plan, it is said, has worked out very satisfactorily on the whole, and there seems little doubt but that it could be followed with equal advantage by Canadian sellers.

One of the most important arguments to be advanced in support of the idea of bringing the retailer to the distributing centre is that it would tend to establish a direct connection between the buyer and the wholesaler or manufacturer, as the case may be, instead of indirectly through the traveller, and to that extent would overcome the serious loss of business which arises every time a traveller who has worked up a good connection among the retail trade decides to make a change. There are few wholesalers who have not suffered from this cause at one time or another, and any plan which makes for greater stability in their business, by freeing them from their dependence on travellers, should be warmly welcomed.

The proposal, of course, is not without objections. No matter to what extent the practice may develop it can never eliminate the traveller as a part of the mechanism of commerce. Staple lines can be just as well purchased through the traveller as at the warehouse; they require to be restocked many times in the course of the year, and generally it is the man on the spot who secures the business. The traveller, therefore, is a fixture, and the payment of railway fares to visiting buyers would only seem to be an extra bill of expense.

To what extent this would be offset by the advantages to be derived from such a system is open to question. Those who have looked closely into the matter are of the opinion that the operation of such a plan would be attended with beneficial results, both for the buyer and for the seller, and it must be confessed that some weight is lent to this view by the warm support accorded the associations in the cities above mentioned. On the whole the movement would seem to be one to which manufacturers and wholesalers should give serious consideration.

A BRITISH CONSULAR SERVICE FOR THE COLONIES.

IN a letter which is published elsewhere in this issue, attention is directed to the steady decrease of Great Britain's share in Canada's import trade. In 1884 out of total imports of \$116,397,043, the United Kingdom sold us 40.14 per cent. and the United States 46.67 per cent. Twenty years later, in 1904, out of total imports of \$259,211,803, Britain sold us only 24.57 per cent., whereas the United States sold us 59.98 per cent, a loss in the former case of 15.57 per cent., and a gain in the latter of 13.31 per cent. This, too, in spite of the 33 1-3 per cent. preference enjoyed by British goods in the Canadian market.

The reasons for this unfortunate condition are not far to seek. First and foremost the United States enjoys a tremendous advantage over Great Britain by virtue of her geographical position. Next she has improved her natural advantage by the appointment of consular agents throughout the length and breadth of Canada. Lastly, she studies our market and supplies us with goods that are suited to our requirements and that meet the popular taste.

In regard to the second of these, Mr. F. C. T. O'Hara, Superintendent of Canada's Commercial Agencies, contributed an interesting and instructive letter to a recent issue of the *London Times*. Mr. O'Hara points out that the United States Government have 189 consular and trade agents of various ranks scattered throughout Canada, reporting regularly to Washington upon every conceivable topic of commercial information. These reports are promptly printed in a daily pamphlet, and distributed free through the mails in every state of the Union. By this means the United States exporter is kept constantly in touch with trade opportunities wherever they may arise in Canada, and should he desire further particulars there is always someone on the spot to whom he can write for information.

Other countries are similarly represented in Canada. From Norway and Sweden there are 33, from Germany 16, from France 15, from Brazil 14, and so on, Colombia, Hayti, and Greece concluding the list with one each.

As against this, Great Britain has no representation in Canada whatsoever. She maintains an elaborate and expensive consular service in all foreign countries, but Canada, in common with other parts of the Empire, has been entirely overlooked. Handicapped as she is in this market by a sea voyage of 3,000 miles, it seems strange, as Mr. O'Hara remarks, that Britain should permit herself to be placed at a still greater disadvantage by standing quietly aside while active and energetic United States consuls are ever alert all over the Dominion to increase the market for United States goods.

The establishment of such a service would go a long way towards educating the British exporter as to the requirements of the Canadian market. Many a Britisher attempting to do business in Canada is surprised and indignant at the comparative indifference with which his overtures are received. A prominent London manufacturer on a recent visit to this country denounced our imperial preferential policy as a sham. "Canada," he stated, "does not want to buy from Britain; she would rather buy from the United States." A little investigation disclosed the fact that the article he was endeavoring to sell in this market was of a style which Canada had discarded years ago. We do desire to buy goods from Britain, and to buy far more than we are buying at present. Trade to be permanent must be reciprocal. We cannot hope to go on selling to England unless we are prepared to buy proportionate quantities by way of exchange.

Larger purchases from the United Kingdom means larger return cargoes for the boats engaged in marketing our produce abroad, which in turn means lower freight rates all around. It is essential to Canada's interest that the import trade from Britain should be stimulated. But in the pursuit of that object she can never be persuaded to buy goods that are antiquated and that it is impossible for her to use. It would be absurd to suppose that British factories were incapable of producing the goods that Canada demands. They have all the necessary facilities in the way of equipment; what is needed is simply a clearer idea as to the requirements of our market, and a willingness to modify present styles to meet those requirements. To this end a corps of well informed and carefully trained commercial agents would seem to be indispensable, and if Britain will only try the experiment there seems little doubt but that she will capture a large share of the business which is now picked up by the energetic and ubiquitous Yankee.

NEW ZEALAND STEAMSHIP SERVICE.

THE announcement made last month from Ottawa to the effect that negotiations had at length been concluded by the Minister of Trade and Commerce for the inauguration of a direct steamship service between Canada and New Zealand would doubtless be received with general satisfaction.

The need for such a service has long been apparent. It is now some years since the eyes of Canadian exporters were first opened to the possibilities of the New Zealand market as an outlet for manufactured goods. Slowly, but steadily, they have been cultivating that field, sometimes, it is true, with indifferent success, owing to the handicap under which they labored through having to ship via United States ports. But since the adoption of the reciprocal preferential tariff, conditions have greatly improved. The volume of trade has increased to such an extent as not only to warrant the establishment of a direct line of steamers, but to make such communication an absolute necessity. The international exhibition to be opened at Christchurch next fall should stimulate this trade into still larger volumes, so that the inauguration of the service at the present time would seem to be most opportune.

It is to be regretted, however, that in arranging the details of this service more regard was not had for the interests of those most likely to make use of it. According to advices received from Ottawa the service is to be a bi-monthly one from the port of Vancouver. What Canada needs is a line of steamers from our eastern ports instead of from the West. The large majority of manufacturers engaging in the New Zealand trade are located in Ontario, Quebec and the Maritime Provinces, and while it is true that their quickest and most direct route is via Vancouver, the long rail haul across the continent is an expense which few of their commodities can stand.

In the preferential treatment for Canadian goods our exporters have a decided advantage over their competitors in the United States. Every care should be exercised to protect that advantage. The object in establishing an independent line of steamships should be to make their position unassailable. But if, in order to avail themselves of that line, they are to be subjected to burdensome railway tolls, it is questionable if all the advantage of the preference will not be lost.

WAGES IN CANADA AND THE UNITED STATES.

WE publish below some extracts from an insert, now being issued by the Census Bureau, regarding the average earnings of workmen in Canada and the United States, from which it would appear that the disparity between the wages of the Canadian factory employee and the United States employee may not be so great after all. It will be remembered that in the introduction to Volume III. of the Census the Canadian manufacturer was credited with an advantage over the United States manufacturer of \$148.64 per employee by reason of the lower rates of wages paid, and INDUSTRIAL CANADA pointed out at the time that comparisons of this sort were likely to be misleading owing to the widely different conditions prevailing in the two countries; that the disparity was probably to be explained by the large number of Canadian factories that were idle during the census year for periods varying from three to nine months. The real explanation, as discovered by the Census Commissioner, is set forth in the following paragraphs:

"Further investigation made since the printing of this volume has resulted in showing that the comparative averages of wages and products per worker are not fair to Canadian industries. In the Canadian tables the number of wage-earners is the whole number employed during the year as given in the returns of manufacturers, while in the American tables it is an average computed in the Census Office from data of greatest and least numbers employed per month, and of months in operation of manufacturing establishments in the year. The American method, which is explained at pp. ciii-cxxxiv. of the Introduction to Volume VII., was unfortunately overlooked by the writer, and the effect of this discovery is to invalidate the comparative averages of wages per worker in columns 3 and 4 of Table 43, as well as the comparative average of value of products in the last paragraph of this report, since the American averages would be substantially reduced if computed from the total number of wage-earners employed instead of a number which is an average of averages. In both Canadian and American tables the amount of earnings is made up from the actual returns entered in the schedules.

"The months in operation were not tabulated for the United States report to show full time, three-quarters time, half time, etc., as they have been in the Canadian one, but they were used as data to assist in computing the average number of employees, and it is stated that they were of great value in the Census Office in these computations."

"Without knowing the whole number of wage-earners employed in United States establishments it is not possible to make a fair comparison of the average wage or average value of product per worker in the two countries, and as they stand in Table 43 of our report the comparisons of wages must be dismissed as things unlike."

While it would have been much more satisfactory had we been able to make a fair comparison of rates of wages in the two countries, it will at least be gratifying to know that the very unfavorable showing made by the Canadian workman in the first report is not substantiated by the actual facts. The Canadian method of handling the data from which these averages are derived is unquestionably the correct and scientific one, and apparently the only reason it was not followed in the United States was the large amount of extra labor involved. Our thanks are due to the Census Commissioner for the additional light which he had succeeded in throwing on this interesting but complicated question.

THE RELATION OF FORESTS TO WATER POWERS*

By CECIL B. SMITH, C.E.

Chairman Temiskaming and Northern Ontario Railway Commission.

OUR President, Sir Wilfrid Laurier, in his opening address, placed many interesting topics for discussion before us, but the one which peculiarly appeals to me is the relation of the railway locomotive to the forest. Whether all the damage from fire attributed to the locomotive has been caused by it or not is difficult to determine, but all will agree that the damage has, in the aggregate, been very large, and will continue to be so in the future, for the locomotive screens unfortunately cannot be both effective in preventing the exit of sparks and at the same time permit adequate draft for heavy steaming.

The role of a prophet is often a dangerous, and usually a thankless one, but yet we must have our convictions, and even enthusiasms, and as a great writer has said, "hitch our wagon to a star." I believe we are on the eve of a change. I believe that because of our enormous water power possibilities, and of our relation to the coal mines, Canada should lead not follow, and that in the near future we will have many of our railways, and particularly those in our northern forests, operated by electric locomotives. And in my remarks on the relation between water powers and forests it should be always borne in mind that I have in view that one of the greatest uses to which water powers will be devoted in the near future will be that of electric traction on our present steam railways.

The Power Problem.

Canada is well supplied with coal, both in its extreme eastern and western provinces, but over an area extending for three thousand miles from New Brunswick to the foothills of the Rockies, and from the United States boundary as far northward as we have knowledge of a definite nature, there are no coal measures of importance that have yet been discovered; and while this deficiency is not an absolutely vital one, owing to the abundance of coal in the neighboring United States, yet it is of great economic importance, and has been a large factor in retarding manufacturing in this country.

Now that wood for fuel has become scarce and expensive in many localities, there is a double drain on the pockets of our people, and a continually increasing stream of money is flowing across our southern border to purchase coal for heating and power purposes.

Until quite recently this has not appeared very important because wood, being plentiful, was largely and often wastefully used for fuel and power, and because manufacturing was not carried on extensively, and therefore the power problem did not loom large in the public view. However the last ten years have worked many changes, and we are now face to face with a condition and not a theory.

Street and suburban railways are operated by electricity; cities and towns demand electric lighting; manufactures are

increasing by leaps and bounds, and more and more coal continues to pour over our frontier to meet our ever-growing demand for power.

The natural query is how and to what extent can this unfortunate economic condition be improved upon, and what is the proper channel through which the desired end can best be accomplished?

The direct use of water-power for pumping and grinding is embedded in history, and doubtless such uses will continue to form an important factor in daily life for generations to come. But, excepting in special cases, these uses will be and are confined to water-powers of small dimensions, and the service must be given in the immediate neighborhood of the water-power.

Quite recently, however, the transmission of electricity for considerable distances was fully demonstrated to be feasible and economically important, and at once it be-

came evident that water-powers had assumed an increased market value by reason of the facility with which the power of water could be devoted to the generation of electrical energy, which energy could then be carried without serious loss or prohibitive expense, and in greater or less quantities, to power markets and centres of population.

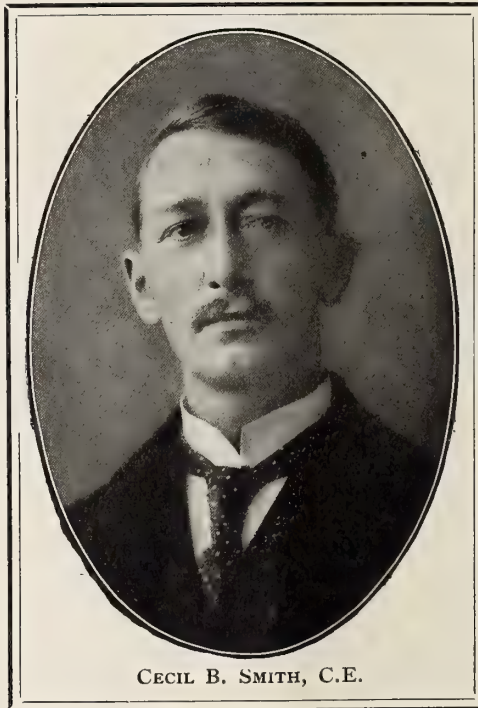
With the preceding statements postulated, the natural question arises, to what extent are we blessed with water-powers over this coalless area, and how convenient are they to centres of population? Also, what has been accomplished to the present, and what is the future outlook?

Canada's Water-Powers.

If we study a map of Canada we find the area before referred to to consist, broadly speaking, of two drainage areas; one tributary to the Hudson Sea, and the other to the St. Lawrence Valley, the population of the country being chiefly centred in the latter area. Doubtless the Sas-

katchewan and Winnipeg Rivers will soon become important from a power point of view; the former because of its relation to wheat grinding, the latter because of its nearness to Winnipeg. But looking at the St. Lawrence watershed one is at once impressed by the great number of large rivers, flowing southward from the height of land, which all have excellent water-powers, and which, flowing as they do from wildernesses, full of swamps and lakes, are admirably uniform in their run-off, and likely to remain undisturbed for some time to come. The development of these powers is at present chiefly along the lines of milling and grinding, and only where situated near centres of population, such as Ottawa or Montreal, are they devoted to the generating of electricity.

Coming, however, to the rivers of that portion of Ontario south of the Ottawa River, and of Quebec south of the St. Lawrence River, a different and much less satisfactory condition prevails; and although in earlier generations



CECIL B. SMITH, C.E.

*A Paper read before the Canadian Forestry Convention, Ottawa, Jan. 10th, 1906.

these rivers may have been quite steady in their flow, this, with two or three exceptions, is not now the case, owing to the great amount of cleared land and consequent rapid run-off of the flood waters as soon as the spring thaws have taken place.

Before coming to the main subject of this paper, which is the relation between forestry and water-powers, it may be interesting to dwell for a moment on the financial magnitude of the question under discussion. At the present time there has been developed in Canada about 350,000-H.P. of water-power, which probably, including transmission lines, represents an investment of \$25,000,000 to \$30,000,000, and considered only on a ten-hour basis, means a saving of at least five tons of coal per horse-power-year, or 1,750,000 tons of coal per year, as compared with about 6,000,000 tons annually imported. Now the near future will easily see this amount doubled or trebled if intelligent and comprehensive plans are adopted for development and distribution, and not only can a large amount of money be kept in our country, but industries and public utilities will be benefited by being supplied with electricity at reasonable rates.

Variation and Control of River Flow.

Speaking generally, water-powers are valuable in proportion to the amount of water available at the periods of low water, which usually occur in August and September, and in February and early March, and it is a matter of common observation that each river is a distinct study in itself, as the variables are not only numerous, but largely beyond the control of man.

The chief features affecting the uniformity and total amount of flow are:—(a), drainage area; (b), shape of area, whether compact, or narrow and long; (c), slope of country; (d), kind of soil; (e), rainfall; (f), evaporation; (g), condition of soil, whether cultivated, pasture or woodland; (h), storage, natural or artificial; (i), control of run-off from storage.

It will be noted that all but the last three items are natural conditions, and therefore beyond the control of man.

However, the large water-power developments which have been attempted to the present have been chiefly made on large rivers, and the pinch of low water has not been so serious as will be the case in the future, when increased values will induce the development of smaller rivers to their fullest extent.

The practical problems of the control of river flow in the thickly settled parts of Ontario and Quebec Provinces group themselves naturally into three districts, which will be treated separately.

A.—Southwestern Ontario.—In this district we have the Nottawasaga, Saugeen, Maitland, Aux Sables, Thames, Grand, Credit, and Humber Rivers, all possessing originally valuable water-powers, but without any natural storage for the water except in the soil, so that as this whole area has been practically (about 86 per cent.) denuded of forests and given over to agriculture, the water-powers have been nearly all ruined, and as the creation of artificial storage would be very expensive, and the country is too valuable as farm land to permit of it ever reverting to forest, little can be hoped for in the way of improvement, and the district will necessarily have to rely on Niagara as its chief source of electric power.

B.—Central Old Ontario.—We find here an entirely different natural condition, and owing to this an exceptional opportunity presents itself for intelligent and comprehensive action which will, if carried out, be of great benefit to future generations.

The French, Magnetawan, Muskoka, Severn, Trent, Moira, Rideau, Mississippi, Madawaska, Bonnechère, Peta-

wawa, and Mattawa Rivers, with their sources in lakes and swamps, all rise from a common plateau, largely unfit for cultivation, still chiefly in forest, and much of it still in the hands of the Crown. They all possess excellent water-powers, many even now near to industrial centres, and up to the present time developed only to a very limited extent. Much of this central plateau is still in virgin forest, but much has been cut or burnt over, and much partly cleared, on which thousands of families are eking out a meagre and precarious existence on land which would be much better occupied if devoted to the growth of another forest of pine and other trees indigenous to the region.

Those who have studied re-forestry will be agreed that to re-forest on cleared land means close planting, as otherwise the trees form their limbs near the ground and become less valuable as timber. But to re-forest a large area of cleared land in this manner would be beyond the means even of a Government, and therefore the idea suggests itself that the proper course to pursue would be to hold this central plateau as it is at present (and possibly even to re-forest some partly cleared or cut-over districts), to limit the cutting of timber to ripe trees only, under Crown supervision; to re-plant from nurseries, and guard from fires, and in connection therewith to gradually create a system of storages for water near the sources of the various rivers mentioned.* Lakes already exist in abundance. All that is needed is the construction of inexpensive dams to supplement those that have already been built by the Dominion Government on the Trent Canal, and elsewhere by lumbermen, and to place the control of the flow of water from these various reservoirs in the hands of proper parties, interested in making the most of the water-powers dependent on these lakes for the uniformity of their supply of water.

The question involved in this district thus presents two phases: one, the improvement of water-powers possessing wonderful natural storage, and amounting when developed to 200,000 or 300,000 horse power, representing at least 1,500,000 tons of coal per year, and on the other hand the upbuilding of an extensive forest district naturally adapted to the growth of pine, but largely unfit for cultivation.

C.—Southern Quebec.—The Yamaska, St. Francis, and Chaudière, with other smaller rivers, have their sources in the foothills of the Notre Dame or White Mountains, and possess valuable lake storage, and while this district is largely arable and fairly well cleared, there are considerable areas which it would pay to hold for all time as forest reserves in order to equalize the flow of the rivers above mentioned, and at the same time prepare valuable forests against the time when timber will be in still greater demand than it is at present.

Doubtless similar problems which exist in New Brunswick demand similar treatment, but unfortunately the sources of the St. John River are international in character, which complicates the problem, and the remaining rivers of the province are not supplied with extensive natural storage, and must depend on soil storage only.

The relationship between stream flow and forests is an intimate one, and in a country possessing valuable water-powers, such as exist in almost every province of our Dominion, this must be continually borne in mind.

The problem is too vast to consider in any other way than as one of preserving our present forests, rather than in creating new ones, and if the far-reaching effect of such preservation is thought of in connection with the preservation and improvement of our water-powers, an added incentive will be given to the natural desire to perpetuate for future generations our present valuable woodlands.

ADVERTISING CANADIAN MANUFACTURES

By J. ANGUS MacDONALD, 5 Boylston Building, Boston, Mass.

Author of "Successful Advertising, How to Accomplish It."

ARTICLE No. 1

Great Growth of Advertising. Its Advantages to Canadian Manufacturers.

This is particularly true in the United States. England also has many examples of successful manufacturers who are successful advertisers, like Pears and Lever Bros. in soaps, Mackintosh in toffee, Bond in marking ink, Buchanan in whiskey, Chivers in jams and jellies, etc., to say nothing of the long list of patent medicine proprietors who have grown enormously wealthy through advertising. It is absurd to think, even for a moment, that a rich crop of dollars is not ready to be gathered through the tools of advertising by Canadian manufacturers and wholesalers with the courage and foresight to "dare and do" in the advertising field.

It is estimated that last year the total advertising outlays in the large commercial centres of the United States reached the Rockefellerian figure of one billion dollars. This is more than ten times the value of the country's pig iron product (supposed to be one of the world's greatest industries.) The following short table of figures is illuminating:

Spent in Advertising, United States.. . . .	\$1,000,000,000
Value of Corn Crop, "	952,000,000
Value of Wheat Crop "	443,000,000
Value of Cotton Crop "	600,000,000
Value of Coal Product "	210,000,000
Value of Pig Iron Product "	91,000,000

The amounts spent in advertising are constantly increasing; the advertising subject in all its diversity is being more intelligently and thoroughly studied; the advertising field is broadening and the conditions attending advertising enterprises are infinitely better than they were.

United States manufacturers and wholesalers have been quick to see the possibilities of advertising. During the past decade many of them have made fortunes through advertising, and Canadian manufacturers who are considering the subject would do well to take a few leaves from the book of United States advertising experiences.

The usual method for a manufacturer in that country is to give his product a distinctive name; have it protected by a copyright; then advertise the product liberally and wisely with all the resources of Twentieth Century publicity ideas.

If the reader will look through the average ten cent magazine or big daily newspaper he will see this amply illustrated, especially in the many advertised clothing brands. The average young man nowadays who is at all punctilious in his dress, and who is satisfied with ready-made clothing, calls for a suit or overcoat bearing a certain label (well advertised, too). He calls for a certain make of shoes, a certain brand of shirts, a certain style of hat, a certain brand of collars and cuffs—in fact, he is likely to restrict his entire clothing to the advertised kinds.

Thus you are likely to find the intelligent young Yankee

wearing a Stein-Block suit or overcoat, a Dunlap hat, a pair of Douglas shoes, an E. & W. collar (and a pair of cuffs of the same brand), a Monarch shirt, Jaeger's underwear, an Ingersoll watch, and perhaps smoking a Jenkison stogie—simply because each item is vividly and everlastingly held up to his notice through advertising. He probably eats well advertised foods, and drinks well advertised beverages at well advertised restaurants, and when he goes to sleep he is likely as not to sink into the arms of Morpheus on an Ostermoor mattress—again, because it is well advertised.

This is no fancy sketch. On the contrary it comes pretty near being an actual transcript of what may daily happen to any wide awake young person in the United States, where the tremendous amount of insistent advertising influences almost every one who has eyes to read.

Advertising cuts more figure in our private lines than we ordinarily realize. It is only when we "stop to think on it" that we realize its potent and wide reaching influences, and the great aids it affords producers in placing their goods before consumers. About all the well advertised brands are worthy; people have realized this, for it is the poorest kind of poor business to advertise an article that does not stand the test of time and usage. If a manufacturer produces an article—say of clothing, or food, or drink, or medicine, or amusement—that can be sold to humanity at large he should surely advertise it. There is no force than can so help the sale of such an article as advertising. An advertisement obtains an entrée where often the most accomplished human salesman would not be admitted. A drummer might find it difficult to gain admittance to a home or club, and talk up his wares, but the proper advertisement in the proper medium finds its way without the least hindrance into the most exclusive circles.

The methods of United States producers who advertise should be seriously studied by their brother producers across the border. It is an interesting study—a profitable study—a study worth any Canadian manufacturer's consideration. The growth of Canadian industries is attracting world-wide attention just at present. The trumpet of modern industry is advertising, and the Canadian manufacturer should blow this trumpet just now pretty loud. It will pay!

I remember several years ago attending a banquet at the Sphinx Club, New York. The Sphinx Club, by the way, is the world's leading advertising club, and its founder and guiding spirit is a young Canadian business man, Mr. H. James Gibson. Mr. Paul Dana, of the *New York Sun*, made the first speech, a good one, too. The subject of the evening was, if I remember aright, "The Expansion of American Advertising," but Mr. Dana gave it a happy twist, calling it "The Advertising of American Expansion,"—especially timely in view of the fact that only a few days before Dewey fought and won the Battle of Manila. He gave a most excellent talk, and I happen to remember it now as being so very timely, so far as relating to United States advertising. The time has now come in Canadian affairs where Canada's expansion of trade should be fittingly advertised, and this could be done, to their own great profit, by leading Canadian producers. They have the goods; the tools of trade, viz., advertising and salesmanship, are all ready for use; and the manufacturers using them early, earnestly and intelligently will reap rewards.



Forestry on Dominion Lands*

By E. STEWART, Dominion Superintendent of Forestry.



IF I know anything of the object of the convenor of this great convention in calling you together, it was to obtain the views of the people from all parts of the Dominion in order that good, practical results might follow your deliberation. If we only meet and indulge in a pleasant academical discussion without expressing some opinions of what should be done in a practical way, not only to preserve but to propagate our great forests, this meeting will fall far short of its opportunities. The fact is, the matters inviting our attention in this connection are far more than academical; they are live issues that demand of the people of the country immediate action, and in the few minutes at my disposal I will ask your attention, first to the extent of the forests under Dominion control; second, to what we are doing at present regarding them; third, what in my opinion should be done; and, fourth, make a brief reference to afforestation on the plains.

Extent of Forests Under Dominion Control.

When our Northwestern possessions are mentioned, the picture generally suggested is that of vast prairies stretching for hundreds of miles on every hand, unrelieved by a single tree. Now while this is true of a very large extent of country, it represents only a small part of the total land area owned and controlled by the Federal Government.

According to the census returns for 1901 the total land area under the control of the Dominion Government is 2,656,200 square miles. Of this the bare prairie probably occupies 160,000,000 acres, or 250,000 square miles. The barren lands of the far north I have elsewhere estimated at four times that of the prairie, or 640,000,000 acres, or 1,000,000 square miles. These two would make 1,250,000 square miles of treeless land, and subtracting this from the total land area under federal control will give us 1,406,200 square miles, which is more or less wooded. The total area owned by the provinces aggregates only 963,618 square miles, so that the Dominion timbered land, according to this estimate, exceeds the total land area both timbered and cleared up of all the old provinces by 442,582 square miles.

But it may be truly said that on a very large proportion of this the forest growth is of little value for commercial purposes. Let us make due allowance for this, and estimate that only one-fifth of this land contains timber fit for such purposes. One-fifth of 1,406,200 square miles gives 281,240 square miles.

We have now taken from the total land area under Dominion control the barren lands of the far north and the prairie land, and then taken only one-fifth of the remainder in our estimate to represent the area of land containing merchantable timber; and we have still left 281,240 square miles. Suppose that the latter area contains only 2,000 feet board measure to the acre, or 1,280,000 feet to the square mile, over ten inches at the stump, and we have left after all these reductions 359,987,200,000 feet of mature timber, which at the low rate of royalty to the Government of \$1 per thousand would be \$359,987,200, which sum represents but a small part of its value to the community and does not include the smaller growing timber which should be regarded as an agriculturist does his growing crop. It is true that much of this timber is not at present available, but it is a portion of the nation's inheritance, and the Government as trustees of

the State are in duty bound to conserve it whether it is used by those now living or reserved for future generations.

This vast area represents Canada's woodlot. Let us save it while we may! The greater part of the timber is growing on land unsuited for agriculture, either from its high altitude of high latitude. We have in that great region, which is well described as our sub-arctic forest belt, a vast tract of such land. The spruce trees abound everywhere, and as it is the most desirable of all varieties for pulp, it is even now being looked after for that purpose. This region, too, is the home of a great variety of the most valuable of the fur-bearing animals, whose existence is dependent on the preservation of the forest. Within its area are many great lakes and rivers which, owing to the cool temperature of the water, contain fish of the finest quality.

We have also in those wilds, owing to the rough character of the country, rapids and waterfalls innumerable, which will furnish sufficient power for all purposes at little ex-



Prairie Farm in Southern Manitoba, sheltered by an Artificial Grove of Maples. Probably about 100 years old.

pense. Of its mineral wealth it is too early to speak, but the example of the Yukon teaches us that the explorer need not confine himself to the lower latitudes, and as timber is one of the great requisites for mining, the forest is necessary to its success.

But here too, important as the forest is for the purposes I have named, it is even more so for its influences in various ways. Time will not permit me to notice at any length perhaps the most important of all reasons for immediate attention to our forestry problem, and that is the necessity that the country at the sources of our water supply should be kept in forest. Denude, for instance, the eastern slope of the Rocky Mountains of its forest growth, and as sure as result follows cause, you will destroy the great rivers that have their sources there. You will create a raging torrent for a few weeks in the spring, and after that a water famine. You will destroy the North and South Saskatchewan, the Athabasca and the Peace Rivers, and you will make a desert of our new western Provinces. Your irrigation canals in Alberta will be raging torrents for a short time and devoid of water when it is required. You will simply bring about a condition of affairs which anyone can see to-day in Southern Europe, in Northern Africa, and in Asia Minor, where large areas of country once fertile, are now, owing to the denudation of the timber on the mountain side, practically a desert.

* A paper read before The Forestry Convention, Ottawa, Jan. 10, 1906.

But let us look nearer home. The future of this City of Ottawa as an industrial centre depends on the valuable water powers of the Ottawa and Gatineau, so near at hand. But unless precautions are early taken to preserve the forests at the head waters of these streams, we will have raging floods for a short time in the spring, followed by a great scarcity of water later on, which will render the power so unstable as to be practically worthless.

Again, to say nothing of the evil effects on the fertile land further South that would follow the destruction of the forests lying North of the provinces, which at present form a barrier against the northern air currents, the severe winter of those high northern latitudes would be almost intolerable by reason of the Arctic winds that would blow uninterruptedly over the denuded land. The fact is that voices come to us from all quarters calling us to protect our timber areas.

What Are We Doing?

I shall in a few words try to answer this question so far as the Dominion lands are concerned, but it must be admitted that our efforts are small indeed, compared with what should be done, but nevertheless sufficient to show remarkable results. Fires are the great enemy of our natural forest, and these usually accompany the early opening up of the country. The building of railways, the use of fire in clearing the land by settlers, and the camp fires of travellers are among the agencies that have caused great destruction of timber in the past. Lightning has also contributed, but in a much smaller degree. The latter is uncontrollable, but the destruction from the other causes may be greatly lessened by due precautions, and the enforcement of regulations. Not only during the construction of railways through the timber are great precautions necessary, but after the roads are in operation the sparks from the engines are liable to start disastrous fires.

In 1901 a system of forest patrol and guardianship on Dominion lands was started, which has been somewhat extended since. I cannot give details of the system, suffice to say that rangers are assigned certain territory where it is deemed their work is most required. Each of these men is under the supervision of some one in the district, usually the head forest ranger, crown timber agent, or someone known to the Department. It is the duty of the supervising officer to instruct the ranger when to start work and when to quit, and to certify to his time of service before his account is paid. In case of a dangerous fire starting which requires more men to control it, the ranger has authority to engage men for that particular purpose.

During the past season we had about forty regular rangers employed, principally in the railway belt in British Columbia, along the foothills of the Rocky Mountains, along the North Saskatchewan River and country north of that river, along the Athabasca and in the wooded districts of Manitoba and Saskatchewan.

As to the result of such a service, the railway belt in British Columbia furnishes the best example. Prior to the adoption of the fire service five years ago, there was an annual destruction of large quantities of merchantable timber, while during the past five years practically none has been lost, notwithstanding that they have had a succession of very dry summers, and outside of this railway belt hundreds of millions of feet of magnificent timber have been destroyed.

No better investment of public funds can be conceived of than in this protective service. What town or city would

be guilty of such folly as to refuse to afford some system of protection against fire for its buildings, and why should the nation fail to take similar precautions to protect its own forest property? The buildings in a town or city can be replaced in a year, while a century or more would be required for the restoration of a forest.

Within the past year the Forestry Branch has started making a careful examination of the forest reserves, and it is the intention to continue this work till we have a complete knowledge of the timber on them, the quantity, varieties and quality, rate of growth, etc., with a view of removing the dead and down timber and harvesting the full grown crop and fostering a permanent reproduction. It is also hoped to be able to employ expert men in the examination of other timber areas, in order to obtain information as to what areas it is desirable to further set aside as reserves.

What Should Be Done.

One difficulty in our work is to know what we have. We know practically nothing of our timber and other natural resources extending over a large proportion of our possessions. In the early history of Canada the pioneer was very much in evidence, but when the people settled down to sedentary occupations the spirit of adventure seemed to die out, so that to-day we know no more, perhaps less, of our unoccupied wilderness than did the voyageur two hundred years ago.

Exploration in advance of settlement is a necessity. With the knowledge that this would furnish us we would be able to assign such districts to agriculture as would be best suited for that purpose, and to leave in forest land not adapted for agriculture, but suited for the growth of timber.

Canada is practically the only country in the northern hemisphere to which the eyes of the world are turned for a timber supply in the time of great scarcity which is fast overtaking us. Let us at once take means to preserve what we have for this contingency. Let us remember not only our present supply, but that we are dealing with that kingdom of nature where the life forces are at work, and where reproduction and growth may indefinitely prolong the supply if nature is not prejudicially interfered with.

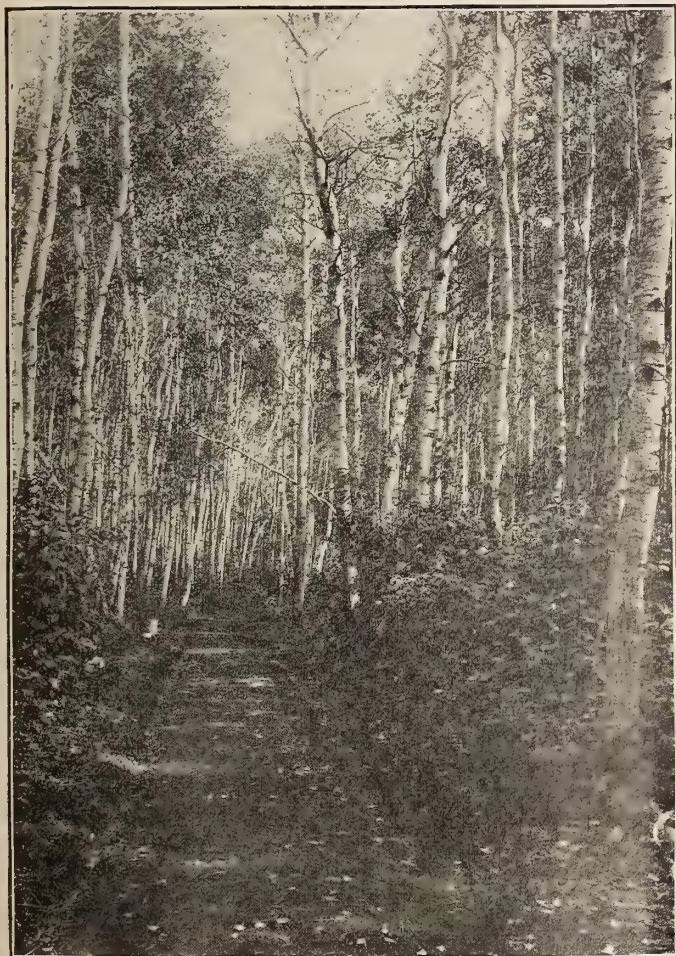
The attention that has hitherto been given to the forest in this country has been in cutting it down either for the value of the timber or to get rid of it in order that the land might be more profitably employed for agriculture; but the day has now arrived when we should cease to regard our productive forests as mines from which only a fixed amount of wealth can be obtained and then abandoned. We should recognize the fact of continuous growth and reproduction of the same varieties, crop succeeding crop for indefinite periods of time. To be sure it takes about one hundred years for the growth of a mature timber crop, but it requires no labour on our part, and it asks only that we allow nature without interruption to do its part, and generally, too, on land useless for other purposes.

Owing to the long period required for the production of a mature timber crop the individual cannot be expected to take the same interest in it that he does in agricultural crops that mature in one year, and for this reason forestry belongs more to the State, whose life is not measured by years, but by centuries. There is another reason why forestry in this country belongs more exclusively to the State than in perhaps any other country in the world, and it is owing to the fact that most of the land on which our valuable timber grows is still held by the Crown; and considering that the nation is the owner it is appropriate that this meeting

is called in order that the Government may have the views of those competent to give advice on a matter that they are called to administer.

Most of the countries of Europe make the administration of their forests one of their most important departments of Government. India, through the efforts of Sir Diedrich Brandis, now possesses a forestry service which is not only procuring excellent financial results, but is also working on lines that are greatly benefitting the country in conserving its water supply, that was rapidly becoming exhausted. The United States within the past few years has awakened to the necessity of action, and is now expending large sums in the service, and there is no reason why Canada, with the timber wealth it possesses, and with the advantages of government ownership to which I have referred, should not take a leading place among the nations of the world in its forestry management.

In this connection there is just one more point that I would like to submit for your consideration. It is one that I have had in mind for some time, and which I am fully persuaded could be adopted without difficulty, and would be greatly in the public interest. It is this, that in all future patents of timbered land a proviso should be inserted that at least 10 per cent. of the area conveyed should be left in



Showing character of Forest Growth in the Moose Mountain Timber Reserve in S.E. Saskatchewan. Mostly Aspen Poplar, with undergrowth of Hazel.

timber; that the timber growing thereon should be the property of the patentee, but only to be cut under the authority and supervision of the Government. I believe such a reservation was made in some of the seigniorial conveyances in

Lower Canada, and the old Upper Canada Land Company, if I am not mistaken, made a similar provision in some of their deeds.

I have little time left to say anything on tree planting on the plains, which the Forestry Branch of the Depart-



Jack Pine Timber in Rocky Mountain Park Reserve, near Banff, Alta.

ment of the Interior has started there in co-operation with the settlers. It is sufficient to say that when we have sent out in the spring the nursery stock now ready for shipment we will have distributed in all about 7,000,000 trees free of charge to settlers living on the bare prairies. The system we have adopted is meeting with gratifying success, and it is confidently predicted it will prove of incalculable benefit to the great plains region.

The New Zealand Steamship Service.

A contract was entered into on December 28th last, for a service between Canada and New Zealand by the Canadian Government and Messrs. Bucknall Bros., of London. The service is to be performed by steamers of at least 2,700 tons gross register, and is to commence by the 28th of March next. Vancouver will be the Canadian shipping point, and in New Zealand calls will be made at Auckland, Wellington, Littleton, Dunedin, and Bluff. The service is to be every two months from each end, and permission is given to call on any trips at Fiji and Victoria. Should the traffic warrant it the contractor is to furnish additional sailings. The subsidy is to be at the rate of £10,000 per year for three years, conditional upon the New Zealand Government paying a similar amount. Freight rates will at all times be subject to approval by the Minister of Trade and Commerce.

ECONOMY IN MANUFACTURING

By H. L. C. HALL, Fellow I.A.S.

THE problem of the economical conduct of manufacturing enterprises is receiving the closest possible attention, and justly so, for upon economy depends success in almost every case. It may be that present conditions in any given industry or in certain given cases do not make it absolutely necessary to the life of the industry that reforms be instituted, but it is admitted that such reforms will in time become necessary, and the wise business man forestalls the time. The more profitable the trade the more surely will that time come, for profit attracts competition, and competition invariably reduces prices and profits. Price is the sole consideration, and price is finally regulated by the age-old law of supply and demand. A larger demand will breed an increased supply, and finally another law will be brought to bear—that of the “survival of the fittest.” In the manufacturing world the “fittest” is the one who can produce satisfactory goods at the lowest price. Hence the excuse for the study of economy even before the need becomes imperative. Even though there were never to be a time when the life of the business would depend upon further economy, a study of the subject and the application of the deductions arrived at is still worth while, simply because economy means the elimination of waste, and waste never benefits any one. Stop the leak and apply the saving to some useful purpose and your study of better conditions has amply justified itself.

The Necessity of Records.

Broadly speaking, factory economy means the production of your output for less money, but this does not necessarily mean that those engaged under you will do more for the wages you pay. Sometimes the waste lies in the wrong application of mechanical or physical energy. The first consideration is the elimination of wasted energy of all sorts whether your own, your employees, or in your machinery. The first step is a systematic study of existing conditions. This does not mean a walk around the plant and a cursory view of what is to be seen in such a jaunt, but a tabulation of each and every operation incident to your process of manufacture. Observation is of great value, but it must be supplemented by records which will confirm or contradict your impressions.

A set of records of the sort spoken of constitutes the back-bone of what is commonly called a cost system. To say “cost system” to some of our more conservative manufacturers is like shaking a red flag before a bull. As soon as the term is mentioned the mental vision conjures up a picture of an army of clerks engaged in the production of a lot of figures which can only be understood by an expert in the subject. It brings to his imagination a big addition to his salary roll without any compensation. This is all wrong. To instal such a plan or system does not necessarily mean the addition of a single man to your force, or a single penny to your expenditure. On the contrary it usually means cutting down the relative amount of each. The true measure of your expense is the relation between what you spend and what you get for it. The amount considered as dollars and cents has no significance whatever. Though a thing costs but a few pennies it is not necessarily cheap. Perhaps even those few pennies are too much. Perhaps the thing itself is unnecessary, in which case the whole amount though small is just so much waste. There is but one way to

determine which of these is true, and that is a tabulation of all operations and their cost in such a manner that a day-by-day comparison is possible. It may seem like a large order to accomplish this, but if the proposition is taken hold of rightly its difficulties will fade away one by one, and you will wonder how you ever got the idea that it was a difficult subject to tackle.

Carelessness Breeds Carelessness.

Naturally, the proper place to commence is at the beginning. The first thing to be considered in any manufacturing concern, no matter what the line, is raw material. This must be at hand or no operation can be conducted. A comprehensive plan for recording the purchase and storage of raw materials, and for the distribution of such materials at proper times and in proper quantities is the first step. Let orders for materials be made in such fashion that a record is left of each order. This can be done by the use of carbon copies without adding a moment's work to that necessary under your present plan. When the materials are to be put to use, see that they are issued only by authority, and in such a way that the fact of their issue is recorded. You do not think of saying to your employees, “There is the cash drawer, if you need money, help yourselves.” Why then do you pursue the same plan with that which costs money—your raw materials. As a matter of fact this is just what you do say when you store raw stock where all may have access to it. It does not follow that there is a wilful waste, but carelessness on your part breeds carelessness on the part of others, and the chances are that you will be astounded at the percentage of material unaccounted for when you get a set of figures which will show you what has been used in relation to what has been produced. Take the figures relative to the subject under present conditions now, and compare them with those given you after you keep a complete record, and see if you are not astonished to say the least.

To record the issue of raw materials makes a store-keeper necessary, and at the first glance this will seem an added expense. But it is so only in seeming. As things are now, your men help themselves to what they need, and in doing so you have a man at twenty or thirty cents an hour getting out stock and taking twice as long as necessary to do it. He takes longer than is necessary even though he makes all possible haste, because he cannot be perfectly familiar with the location of all he wants. On the face of things it will be an economy to put some one in charge of the stores even if we consider only the matter of a saving of time. It is not necessary in all cases that the whole time of the one in charge be devoted to the issue of stores. Conditions will determine that in each case.

Incidentally it may be mentioned that the same economy may be practised in many different places. Every time you let a twenty-dollar man do the work of a six-dollar boy there is a big waste. Every time you personally do the work of a cheap employee you waste your own money or else you admit that your time is pretty low in value. Do you write your own letters? If you do you own your time to be worth only about six or eight dollars a week, for you can get a stenographer at that figure. If you can find no more remunerative work take another walk around the plant. There is an old and true adage that says, “One of the

master's eyes is worth more than both of the master's hands."

Leaks to be Guarded Against.

Idleness, either of men or machines, in a manufacturing plant is a most common leak. Make work for your machines. Find work for your men. It may seem to you that this advice is unnecessary, but if a close inspection does not show you otherwise you are to be congratulated, for you are in better shape than most. There may be cases where it is necessary for your men to stand around while waiting for the next thing to do, but they are rare. Usually to see the men standing around means that the foreman needs a talking to.

I do not wish to be understood as advocating in all cases a record of materials which will act as a perpetual inventory. In some cases this will be advisable, but in all cases it will be well to supplement the records with an actual inventory of parts of the stock from time to time, to check the accuracy of the records if for no other purpose. Records will not show the results of leakage or of spoiled stock.

Labor records of some sort are necessary, no matter how unsystematic the plan in operation. It adds no cost to make those records in such shape as to let them show the distribution of labor expense. If your cost system goes no further than this the attempt will justify itself and you will need no urging to go on and make the cycle complete. In the next paper a complete plan for all these records will be presented, together with figures showing the cost of conducting the operation of a complete cost system.

It will not be possible here to consider the economy of "scrapping" machinery, in order to replace it with new equipment of greater efficiency. Various considerations enter into this which each individual must determine for himself. It is well known, however, that this is often done, and by the most successful, so there is warrant for saying that it is economy under certain conditions. One thing is sure, and that is, that it is necessary to keep your machinery of every sort at its highest state of efficiency, and to do this a close inspection of all machinery of every sort must be made at frequent intervals. This inspection must be made by some one who will be made responsible for the proper up-keep of the plant. Just what sums shall be expended for the purpose is another matter for individual determination, but the decision should rest upon data and not upon an off-hand judgment from time to time.

In order that these data may be at hand it will be necessary that the plant be charged with every item entering into the permanent equipment, in such a manner that the life and utility of each item will be a matter of record. Is a belt to be replaced? How long did it wear? Was that equal to the usual term; and if not what shortened its life? These questions are only capable of answer from records of the sort spoken of above.

It should be perfectly clear that economy is possible only if each item of expense is closely watched, and it is not possible to watch these things to a good purpose unless your recollection as to performance is reinforced with actual facts drawn from the records. Tabulated records, then, are a necessity, and it only remains to make these records possible without adding a further burden to the expense account. That this is possible I shall attempt to show. In all this it should be not so much a question of reducing expense as to make it possible to increase the output without adding to the expense except for raw materials, and to see that all materials used produce the proper amount of finished goods.

OUR PURCHASES FROM ENGLAND ON THE DECLINE.

To the Editor, INDUSTRIAL CANADA:—

Why does not Canada buy more from England?

No preference will force trade from a regular channel unless equal or better conditions are offered. The Britannic manufacturer makes no effort to meet the requirements of the bulk of Canadian buyers. This may be instanced in thousands of articles. As an example, Canada buys from the United States about \$20,000,000 worth more of manufactures of iron and steel than she does from Great Britain, or in other words, about six times as much from the States as from Great Britain. In most of the lines Great Britain sells to some extent, however small, which shows that she has factories to produce. But—old time methods prevail, a want of studying the market and its needs.

The vessels plying between the Old Land and Canada carry freight to the West at a loss, because they cannot get enough freight for Canada unless they cut rates. Balance this error and legitimate rates will rule, and other branches of Canadian industry will not suffer, as they do at present, from the fact that lower rates can be obtained from Great Britain to a given point in Canada than can be obtained from important Canadian centres to the same point.

As a comparison, the following table is submitted. The percentage is based on the exports or imports of the year given. It will be noticed that the preference granted the Old Country manufacturer did not help him, compared with the attention given the Canadian market by the live, up-to-date United States seller, *who gets practical information from consuls.*

Canadian Exports to

Year.	United Kingdom.	France.	Germany.	United States.
1884.	\$37,410,870 46.86%	\$338,162 0.49%	\$183,326 0.23%	\$34,332,641 43.01%
1904.	\$110,120,892 55.50%	\$1,539,462 0.78%	\$1,358,910 0.69%	\$66,856,555 33.70%

Canadian Imports From

Year.	United Kingdom.	France.	Germany.	United States.
1884.	\$48,418,015 40.14%	\$1,769,849 1.64%	\$1,975,771 1.83%	\$50,492,826 46.67%
1904.	\$61,777,574 24.57%	\$6,206,525 2.47%	\$8,175,604 3.25%	\$150,826,515 59.98%

See the reversal of the figures of Great Britain and the United States!

Let any person interested in the question, "What shall we buy from England?" take up the last issue of the Trade and Navigation returns and see the goods now being bought from the United States which could be made in Great Britain!

It is time that the commercial interests of the United Kingdom should appoint good, smart, practical business agents to reside in Canada, who would be able to recognize what is needed by our people, find out who supplies it, learn its value, send samples home along with figures, showing the extent of the demand. Then let the Old Country manufacturer give up his infatuation for the obsolete idea that the world must buy because he makes, no matter whether it is wanted or not.

Another ten years would alter the above tables to read in favor of Britain.

JAS. P. MURRAY.

ABOUT OWNER'S RISK

The Practice of Railways Limiting their Liability for Injury to Goods Carried.

IN discussing the rules of the Canadian Freight Classification before the Board of Railway Commissioners recently reference was made to the advisability of abolishing the rule under which tariff is transported at the owner's risk, and requiring railway companies to transport all freight offered them for carriage at the risk of the carrier, except as limited by common law.

This request for a reversion to the original basis of contract between shipper and carrier suggests an enquiry as to how the change to the conditions which obtain to-day, and under which the carriers are permitted to limit their liability, was brought about.

Original Practice.

In the early days when the vehicles of transport were canal boats and waggons, common carriers under the English laws were held to be insurers of the freight they carried against all accident, except occasioned by the act of God, public enemies or vice inherent in the thing carried, and in the latter would be included insufficient packing.

For many years prior to the passage of the Carriers Act in 1830, (the records extend beyond 1700) carriers were to some extent permitted to limit their liability at their ordinary rates of carriage by giving public notice thereof, but in most cases it was required that the carrier should show the notice to have been brought home to the shipper in order to secure the benefit of the limitation. This practice was responsible for many difficulties, because of the necessity for proving that the carrier's notice limiting liability was brought home to the shipper, and on account of failure, designedly or otherwise, of the parties employing the carriers, to declare the contents and value of parcels when additional rates were demanded for insurance.

Relief Granted Carriers.

The contentions arising from the practice of bankers and others sending parcels containing money, jewellery, and other articles of great value in small compass by stage coaches and waggons is said to have reached such proportions as to demand the attention of Parliament, and resulted in the passage of the Carriers Act of 1830, which was entitled "An Act for the more Effectual Protection of Common Carriers for hire against the Loss of, or Injury to, Parcels or Packages Delivered to them for Conveyance, the Value and Contents of which shall not be declared to them by the Owners thereof." In the preamble it was stated that owing to such valuable property entrusted to these common carriers being liable to depredation, their responsibilities were greatly increased, and they were being subjected to severe losses. For the relief of carriers, it was laid down that they were not to be liable either for the loss of, or injury to certain articles and property enumerated, when the value thereof exceeded £10, unless the value and nature of the property was stated at the time of delivery to the carrier, who had the privilege of making an increased charge for the additional risk. It may be here remarked that the articles of value enumerated are those which are at present found on the back of the forms of shipping bills in general use on Canadian railways. The law also provided that common carriers could no longer limit their liability as insurers by public notice or declaration, but special contracts between the carriers and other parties for the conveyance of

goods were permitted. If special contracts were agreed to by shippers, there was nothing to prevent carriers from securing immunity from liability for loss or injury, even though it might arise from the negligence of themselves or their servants. Nor was it required that special contracts should be in writing.

When Railways Came Into Use.

About 1840 railways were beginning to supersede other modes of conveyance, and it was stated that the railway companies, when they began to secure a practical monopoly of the carriage of goods, were taking advantage of the law to an unreasonable extent in imposing conditions upon their customers intended to restrict or entirely remove their liability. This led to the passage of what was called the Railways and Canals Traffic Act, 1854, which was entitled "An Act for the better Regulation of Traffic on Railways and Canals." This statute made railway companies liable for injury occasioned by the neglect or default of the company or its servants, notwithstanding any notice, condition or declaration made and given. It was expressly stipulated, however, that the railways could make special contracts with respect to the carriage of goods if such were adjudged by the Court, before whom any question relating thereto should be tried, to be just and reasonable. But as railways were still to have the benefit of the protection and privileges afforded common carriers by the Act of 1830, their liability as to articles of value mentioned therein was not affected.

What Is a Reasonable Condition?

As to what were reasonable conditions, generally speaking, it was determined that a condition was reasonable even though it reduced the railway companies' liability to a minimum, provided it was coupled with compensating advantages to the customer, such as a reduced rate of carriage, and the latter had the alternative of getting rid of the condition by paying a reasonably higher rate. This led to the practice of railways having two rates for the carriage of certain articles, one, the ordinary rate, under which they accepted the liability of a carrier at common law, and the other a reduced rate made on condition that the owner relieved them of all liability for loss or injury arising from negligence.

It will thus be seen that the practice of accepting goods for carriage at the risk of the owner originated before the dawn of the railway era, and the English law of 1830, which was intended to protect carriers in the handling of valuable or fragile parcels at a time when modes of conveyance were crude, was subsequently extended in favor of railways, and has been in force ever since. This has given rise to considerable dissatisfaction amongst the traders in the old land, and for the past three years the Birmingham Chamber of Commerce has persistently endeavored to secure a modification of the unreasonable position in which the railways stand toward the traders.

Situation in Canada.

In Canada, under the general Railway Act of 1868, the law as to limitation of liability by railways seems to have been the same as in England before the passage of the Act of 1854, that is, the railways were free by special contract con-

ditions, when agreed to by shippers, to contract themselves out of liability for injury to goods, even though the result of negligence. The Act was subsequently amended with the intention of restricting the power of railway companies, but the restriction does not appear to have applied to railways incorporated before 1868. Reference to this unsatisfactory state of affairs in decisions of some of the Provincial Courts, and the suggestion that Parliament should pass a law for the whole Dominion founded upon the English Act of 1854, resulted in the passage of the Act of 1875. In this and subsequent statutes, including that at present in force, there is special provision against contracts limiting the liability of carriers for damage resulting from their negligence or omission, but none of the laws prohibit the practice of making special contracts for carriage at reduced rates under which the railways are relieved from their liability as insurers against injury not resulting from negligence or omission.

Present Statutory Restrictions.

By the Railway Act now in effect, Canadian railways are common carriers of all traffic delivered them for conveyance, and, as such, they can be compelled to carry at their risk, except as limited by common law. They have the privilege, however, of offering an alternative reduced rate conditional upon the goods being transported at the risk of the owner as to injury or damage, except from negligence. This has led our railways to include in the Canadian Freight Classification a rule relating to goods to be carried at Owner's Risk. The rule provides that articles shown in the book to be carried at Owner's Risk must be so accepted and receipted for if taken at the rates given in the classification. If the shipper should decline to accept receipt at Owner's Risk, the goods will be taken at Carrier's risk at 50 per cent. increase in rate. About six hundred items in the classification appear to be affected by the Owner's Risk stipulation, although some of these may be duplicates.

Should Special Contracts Be Abolished?

Doubtless the existence of two rates, the lower conditional upon the carrier being relieved from his liability as insurer of the goods, involves discrimination against the trader who conducts his business upon sound lines and refuses to accept the risk of safe carriage by railway when he encounters competition from others who are more venturesome, and for the sake of a reduction in rate would assume the hazard of goods getting through safely. It may be fair to inquire if the facilities of transportation have now reached that state of perfection which would justify the abolition of owner's risk contracts in the public interest. On the other hand, it could hardly be expected that this could be accomplished without a demand from the railways for the readjustment of rates now given for articles of a valuable and fragile nature. The railways claim that the rates at present shown in the classification were based upon the assumption of risk of carriage by the owner of the goods; if a change is to be made, then they should have increased ratings to cover the insurance. There is also the question as to the propriety of prohibiting individuals from making contracts with railways for transportation only and carrying their own insurance. There are articles of great bulk and low value constantly moving upon the railways in great volume, under what are termed special commodity rates. If carriage at owner's risk were abolished, and the railways permitted to charge increased tolls to cover the insurance of this property, it might result in restricting the movement of a considerable portion of it, and the last state would perhaps be worse than the first.

It is well known that the Canadian Manufacturers' Association has taken a very active interest in the modification of the rules of the Canadian Freight Classification, and under the arrangement recently agreed to by the railways the classification, as affecting goods carried at owner's risk, is to be amended by striking out this condition against more than 250 items. Where it remains in the classification, it is to be considerably modified, and defined so as to make it clear that where goods are handled at owner's risk the term covers only injury resulting from the ordinary handling incident to transportation. For any injury or damage arising from other causes the carrier is to be held accountable. Should shippers desire their goods transported at common law liability, the increase over owner's risk rate is not to exceed 25 per cent., instead of 50 per cent. as at present. On the whole, careful thought will probably lead to the conclusion that what has been accomplished is, to say the least, a long step in the right direction.

IS RATE REGULATION NECESSARY?

THERE is a very strong agitation in the United States at the present time for legislation having for its object the more effective regulation of freight rates on railways. As might be expected the powerful railway interests are striving hard against the movement and numerous devices are being employed to counteract the effects of the campaign which is being conducted by shipping interests. In the annual report of the Great Northern Railway for the past year, the President of that line, Mr. J. J. Hill, deals at some length with the subject of rate regulation. Mr. Hill wants the rate-making power left entirely in the hands of the railways with the restriction that penalties be imposed if exorbitant rates are charged. How this is to be satisfactorily accomplished without a tribunal having power, after determining specifically what is the reasonable rate, to enforce the same, does not appear. In speaking before the Senate Committee on Interstate Commerce sitting at Washington, Mr. Hill said he would hold railroads to the strict letter of the law, and enforce it. But, on the other hand, it has since appeared from press reports that representatives of Mr. Hill's railway line have been indicted on a charge of granting rebates to favored shippers, notably in connection with a large shipment of iron pipes to Winnipeg, Man.

In the report of the Great Northern referred to, a table appears, purporting to show that notwithstanding increases in the cost of operating railways there has been a heavy and voluntary reduction in freight rates. The average revenue per ton per mile in 1881 is stated to have been 2.88 cents, while last year the average rate was .79 cents, a reduction of 72 per cent. Then the amount collected during the twenty-five-year period is shown as \$354,580,519, and the amusing illustration is given that if the railway's freight charges had been based upon 2.88 cents per ton per mile in all these years, the amount of revenue collected would have been \$1,031,546,339, and on account of the alleged voluntary reduction it is claimed there has been a saving to the people of \$676,983,820.

This portion of the report was favorably commented upon in a recent issue of the "Montreal Gazette," apparently for the purpose of showing that the railways left to themselves were of their own accord bringing about a steady and marked reduction in freight rates by which the public is benefited. Nothing could be more misleading than the table which the Great Northern presents. As a matter of fact, during the twenty-five years since 1881 the

preponderating increase in volume of tonnage has been in the lower grades of traffic, such as grain and lumber, hauled over long distances, and in the absence of a corresponding increase in the higher classes of traffic the average rate per ton per mile is automatically reduced. The grain crop which increases from year to year as the western prairie lands are brought under cultivation has to be transported over long distances to reach a market. This traffic is charged for at what are known as special commodity rates. The revenue yielded would not equal the average rate per ton per mile paid upon the total volume of traffic handled in any one year, and consequently the steady increase in this particular class of traffic mechanically brings down the average for the whole. If it were attempted to charge the average rate per ton per mile of 1881 upon the grain or other low grade traffic handled in 1905, a considerable proportion at least could never move at all. The illustration when directed against rate regulation fails in its object.

The following instance of discrimination in freight rate by the Great Northern Railway, taken from a railway journal, will perhaps serve to indicate that there is necessity for rate regulation. The Great Northern Railway was said to have contracted for the transportation of 15,000 tons of rails from Chicago to Japan, at a through rate of 40 cents per 100 lbs., which was reported to be divided, 20 cents for the rail line, and 20 cents for the steamer. The distance from Chicago to Seattle, the seaport, is 2,239 miles. The rate named is equal to .178 cents per ton per mile. The operating expenses of the Great Northern Railway for the year ending June 30th, 1904, were \$24,234,542. The proportion of freight earnings to the total was 70 per cent. Using this basis for the expenses, \$16,964,179 would be the freight proportion. Applying this amount to the ton miles reported handled by the road shows .46 cents as the average operating cost per ton mile. This, however, does not include interest or taxes. Adding the latter increases the average cost of transportation to .62 cents per ton per mile. So that it appears that transportation which costs .62 cents per ton per mile is to be rendered for a rate of .178 cents per ton per mile, an apparent loss of .442 cents. Query; Who pays the difference? The shippers of other freight or the men who have their money invested in the railroad property?

So long as it is known that railways are unduly discriminating in their charges for transportation services against localities, shippers and commodities, there will be public demand for Government regulation of railway tolls. Arguments such as those employed by the President of the Great Northern Railway appear to be intended to befog the issue.

Engineers have been at work for some time developing the properties of the New Brunswick Iron Co. at Lepreaux. They claim to have established the existence of a body of magnetic iron ore of very rich quality, and estimate that there are at least 18,000,000 tons of this ore. If expectations are realized the property will be developed to the limit, and blast furnaces and rolling mills will be erected similar to those at Sydney and the Soo.

The cut of the lumber mills in the Ottawa District for the season just closed is estimated at 373,000,000 ft. J. R. Booth leads with 110,000,000 ft., followed by the Hawkesbury Lumber Co. with 80,000,000 ft., and W. C. Edwards with 70,000,000 ft.

THE FAN SYSTEM OF HEATING.

In Canada, where the heating plant is an important factor in the equipment of a factory building, the design and operation of the system installed should be carefully studied by the manufacturer. As a result of keen competition between the manufacturers of heating equipment, large sums of money are now spent annually by the more enterprising firms in the development of advanced ideas. Simplicity in operation, central control, low maintenance and repairs, and an economical use of steam are the factors to be considered, and in meeting these requirements the fan system is becoming of more general use.

With this system the apparatus consists of a fan and heater and an arrangement of distributing ducts. The heater is usually designed for steam, though hot water, hot gases from a furnace or waste heat in any form may be utilized if available continuously in sufficient quantities.

One form of steam coil is the "return bend" heater, in which all pipes are of the same length. With this type the friction is uniform and each length of pipe receives the same amount of steam. The coils are surrounded by a sheet steel casing and the bases are connected by a header. The possibility of damage due to frost is largely eliminated, as the pipes are perpendicular and consequently drain thoroughly.

One of the largest expenses in connection with a piping system is the replacing of steam valves which are destroyed by employees, who through ignorance use too much force to close them. With the fan system this is not so likely to occur as the heater is located in the fan room in charge of one man. The valves allow complete control of the steam supply, and further regulation may be made by varying the speed of the fan engine. Exhaust steam may be used in the coils, for when air passing to a fan strikes pipes at a high velocity it causes a rapid condensation of steam and a correspondingly low back pressure. If installed to use exhaust steam from a condensing engine it will be economy to operate on a vacuum, which may usually be maintained without the use of any expensive vacuum system.

The air distributing ducts carry warm air to the most effective points of distribution. The best method is to carry the ducts below the floor, and from the main duct carry branches to vertical risers bricked in the wall leading to an outlet on each floor. If the factory is a one story building a duct on either side with a short elbow leading above the floor every 20 or 30 feet will be found most effective. In case the underground system is impracticable an overhead galvanized iron duct will be equally efficient, though not of so neat an appearance. The piping in any case should be very carefully designed and installed, for defects in the distribution will reduce results.

Fans are built to suit each particular case and the directions of discharge are made to suit the requirements. If pulley driven it is advisable to operate fans at a very slow speed, for the power increases rapidly when the speed is increased. Moreover by running the fans slowly when first installed there is capacity for reserve, and if an addition to the building is made it can be taken care of by an extra section of heater and an extension of distributing ducts.

The air supply to fans is taken from the buildings if ventilation is not required, and from out of doors when ventilation is of advantage. In taking the air from outside more steam is used, but where a large number of hands are working in confined quarters increased efficiency more than repays the expenditure. In foundries it is customary to provide ventilation when pouring, and at other times to return the air from the building.

A CANADIAN FOREST POLICY

By JUDSON F. CLARK, Ph.D., Provincial Forester for Ontario.

WHEN an individual or a nation is urged to undertake any new enterprise, the advocate must be prepared to show that it is not only practicable and desirable, but that it is a business proposition, or in other words, that it will pay. That there are sentimental considerations urging better care of the forests is undeniable. That they should have weight is equally indisputable. But forestry is absolutely independent of such; its appeal to-day is as a business proposition to business men, and more especially as a business proposition to statesmen, for the whole history of forests and forestry from the time of ancient Babylon to the present has been a demonstration of the fact that the State is the best, if not the only good forester.

Personally, I think it is beyond doubt that the development of a rational, and therefore practical and business-like, forest policy by the Canadian Provinces and the Federal Government will have a greater influence on the prosperity and happiness of our country half a century hence than the solution of any other problem which is within the power of our generation to solve.

There are at least three reasons of paramount importance why Canadian forests should be managed with a view to the production of wood crops in perpetuity. These reasons have already been repeated-repeat them briefly by way of emphasis, and as a foundation on which to base some recommendations for a national forest policy.

For the Permanence of Lumbering Industries.

1. The necessity of a *permanent* supply of logs for the maintenance of our great and growing lumbering and other wood-working industries.

The products of these industries are absolutely essential for the future of our production, our transportation, and our manufactures. Aside, indeed, from the character of its people there is nothing which contributes so greatly to the prosperity and happiness of a people than an abundant supply of wood at reasonable prices. Wood forms the very corner-stone of modern industrial life, and as years go by, modern civilized man demands and uses more and more wood, all substitution by iron, steel, cement, etc., to the contrary, notwithstanding.

There are some who are better acquainted with the forests than the markets, and others who are acquainted with neither forests nor markets, who still believe and speak of Canada's "inexhaustible" forests. Take any man through a 400,000-acre lot of fine forest so thoroughly that he will have seen all the trees, and it is most likely that he will be ready to believe in inexhaustible forests. Tell him then that all the trees that he has seen would hardly supply the needs of the railways of North America for cross-ties

for a single year, and his "inexhaustible" will appear as futile as it is. We have great but diminishing forests, and great and ever growing needs for the forest products.

For the Conservation of Stream Flow.

2. Second only in importance to the function of the forest as a producer of wood is its function as a regulator of the flow of streams.

Canada's wealth in her water powers is very large. Some one has estimated that two-fifths of the water powers of the world are found on Canadian soil. Whether this be correct or not there is no doubt but that the water powers of Canada vastly excel those of any other nation. What this will mean for her industrial future it is impossible to forecast, perhaps impossible to exaggerate. Add to this the value of the streams for irrigation, domestic use, and navigation, and who would dare guess how many figures would be required to express the value of Canada's streams a

century, or even half a century hence, if maintained in their present efficiency?

If the forest lands of Canada be placed under a rational forest management, the present efficiency, by which I mean, of course, the regularity of her stream flow, may not be maintained only, but much increased. Present methods of lumbering with their accompaniment of fire on the lumbered lands, are annually, and permanently, subtracting from the value of this great national asset.

For Public Revenue.

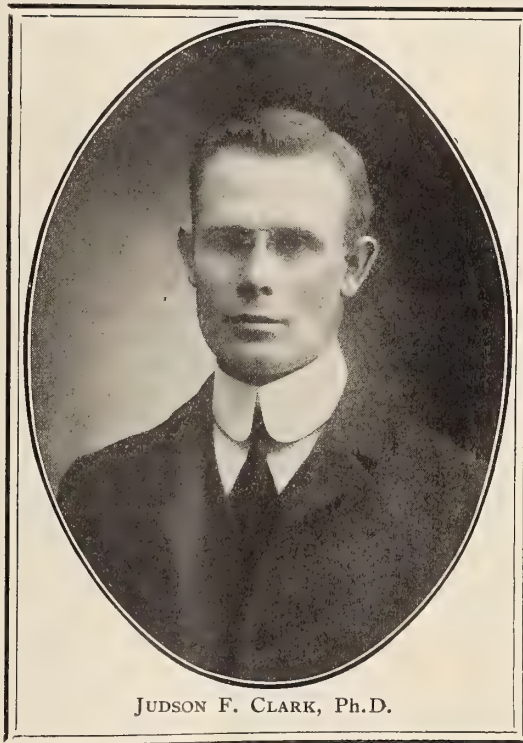
3. A third reason for conducting lumbering operations on non-agricultural lands with a view to improving and perpetuating the forests is found in the fact that it is only by maintaining such lands under forest crops that they may be made to permanently contribute to the wealth of the Provinces of the Nation. Compared acre for acre with arable lands, these rough lands

have a low producing capacity. The vastness of the area involved, however, places the non-agricultural lands of Canada in the front rank of her natural resources.

Not only is it a great national duty born of necessity—the necessities of the future—that Canada care for her forests, but it will inevitably prove a highly remunerative business proposition.

Forest Situation in North America.

North America to-day cuts three-fifths, and consumes more than one-half of the total lumber production of the whole world. This prodigious consumption is very rapidly increasing, both on account of an increase in the per capita consumption and the consuming population. There can be no manner of doubt but that the present annual cut together with that destroyed by fire vastly exceeds the net annual production by growth. In other words, a wood famine in



JUDSON F. CLARK, Ph.D.

North America is already in sight. I was asked the other day when it was due to strike. I replied that as near as I could interpret the signs of the times, the year 1900 would be about right, and that the pressure of prices was likely to become increasingly burdensome from decade to decade until the famine would be unanimously admitted. I understand that many purchasers of lumber are already admitting it.

Canada's Advantageous Position.

Canada will, if she be wise, be more interested in this wood famine as a seller than as a purchaser, and herein lies the possibilities of a great and ever-growing revenue from her public forest lands.

The Canadian forests, which form beyond question the world's greatest remaining reserve of coniferous timber,

form a band across the continent from the Atlantic to the Pacific, bordering the richest farming and manufacturing area in the whole world. The population of the consuming area tributary to our forests has increased four-fold during the last half century, but its wood consumption has increased ten-fold. This marvellous increase in the use of forest products has already established stumpage prices which put national wood culture on a satisfactory financial basis from the standpoint of revenue alone. It should not be forgotten that the rise in prices which makes forestry a business proposition has come about in the face of an exploitation of the forests on both private and public lands such as was never seen elsewhere in the history of lumbering, and cannot be again repeated in North America nor on any other continent.

The territory tributary to our Canadian forests which increased its wood consumption ten-fold during the past half century is to a very large extent merely on the threshold of its industrial development. Nothing is more certain than that the present demand for the products of our forests will be indefinitely maintained—nothing more probable than that it will be increased.

In view, then, of the desirability of caring for the forests as a sound business proposition from the standpoint of direct financial returns, and its necessity from the standpoint of wood production and water conservation, I submit that no time could be more opportune than the present for the inauguration of a national forest policy having for its object the conservation of the forests by wise use.

Forest Protection.

In this forest policy first place must, of course, be given to forest protection, and more particularly to the prevention

of forest fires, for without reasonable safety in this regard there can be no forest management. Considerable progress has already been made by several Provinces in this matter, but everywhere much remains to be done. Further progress is needed along three lines, namely, improved fire laws, more efficient administration of the fire laws, and the disposal of debris incident to lumbering operations.

Nova Scotia has at present the best fire law, though it is in some respects surpassed by that of New Brunswick, and Ontario the most efficient administration.

Practicability of Disposing of Debris.

In the report of the Ontario Bureau of Forestry for 1904, I have discussed in detail the practicability of burning the debris incident to lumbering operations in pineries. I

shall only repeat here that it has been demonstrated that a good, clean job of brush burning may be done on pine lands at a cost varying according to local circumstances of from 12 to 25 cents per M. feet, board measure, of the timber cut. Whether a similar burning of the brush on spruce lands be also practicable has not yet been demonstrated by any fair test on a commercial scale. I submit, however, that the making of such a test is one of the most urgent duties of the Provinces selling pulp-wood stumpage. It will pay any Province vastly better to take ten or fifteen cents less per cord for its pulp-wood and secure the safety and the advantage to reproduction which goes with the burning of the debris than to secure the utmost present cash return and leave the areas cut over for pulp-wood in the deplorable and menacing condition which is to-day characteristic of Canadian pulp-wood slashings.

It need scarcely be added that the State rather than the lumbermen should in all cases bear the expense of such safety measures, for it is in the interest of the future citizens of the State that they are undertaken.

Woodland Taxation.

Forest taxation is, next to fire protection, the most important consideration in planning forest management on privately owned lands. Governments have in their control of the method and amount of taxation a powerful lever to foster or destroy the practice of forestry by private owners. Under normal conditions no woodland owner can be exempted from a fair and equitable share in the burden of government. Where, however, the tendency to deforest reaches the point where the general interests of a community are endangered, the partial or complete exemption from taxation of such woodlands as are devoted exclusively to forest purposes, and come up to a reasonable standard of



Natural Seeding of White Pine in Norfolk Co., Ontario. A fire, following the lumbering operations a little over thirty years ago, disposed of the debris, but failed to kill a number of large trees which were culled by the lumbermen on account of defect, and which later acted as seed trees.

production may be resorted to as a remedial measure; or the taxation may be shifted from an annual tax on the lands to a stumpage tax on the annual cut, thus converting the tax itself into a measure of restraint as regards deforestation.

Classification of Public Lands.

An important feature of a Canadian forest policy must be the exploration and classification of the public lands. Such lands as contain a satisfactory proportion of good plow lands and are reasonably accessible to markets, should be opened for settlement, as the land is required for agricultural development. Townships or larger areas in which the non-agricultural lands predominate, should under no circumstances be opened for settlement, but should be constituted Provincial or Federal Forest Reserves, and be devoted to timber production in perpetuity.

Just what proportion of plow land contained should entitle a township or district to be classed as suitable for agricultural settlement is open to debate. In deciding this point it should be kept clearly in mind that a mistake in choosing too high a standard for the agricultural lands may be subsequently remedied at any time without embarrassment or loss, while the mistake of opening up for settlement lands unsuited for agriculture is certain to be a great and lasting injury to both settler and Province, and is well nigh irremediable, as witness many townships in Muskoka, Haliburton, and elsewhere.

Municipal Forest Reserves.

A second class of forest reserves which the Provinces would do well to foster is what may be termed Municipal Forest Reserves.

There are many townships having within their boundaries considerable areas of waste lands which, after trial, have been abandoned as unsuitable for growing field crops. The only hope of restoring such lands to useful production is by reforestation, and there are many good reasons that may be urged for the undertaking of the enterprise by the local municipality.

It would be good policy for the Provinces to assist such municipalities as are willing to establish municipal forest reserves by advancing the money for the purchase of the lands, and by organizing an efficient forest service for their management. In the course of time, varying from 15 years in

the more southern parts to 30 and 35 years in northern districts, the townships would be in receipt of a steady and very considerable income from their municipal forests for the easement of local taxation. There are many municipalities in Europe having no higher price for forest products than obtain in Western Ontario to-day whose income from such municipal forests pays the entire expense of maintaining schools, roads, and other local improvements, and in not a few cases there is a surplus which is annually divided as a cash bonus among citizens.

Such a system of municipal forest reserves could with the utmost advantage be extended to the newer districts, where townships are being opened up for settlement. All that would be necessary would in this case be to select and reserve from location at the time of the survey a suitable area in the part of the township least adapted for agriculture. Such reserves being already stocked with merchantable timber would be capable of yielding a revenue to the municipality from the first.

Practical Forest Management.

The central feature of a forest policy, and that which gives real worth to all the rest is, of course, the introduction of a system of practical forest management, having for its aim the perpetuation and improvement of the forest by judicious lumbering.

Canadian forest management will naturally differ widely from European forest management, for our forests, our transportation, our markets, and our

people all differ widely. It will also differ somewhat from the forestry of our neighbors to the south, for there are characteristic Canadian conditions to be met—not the least of which is the radical difference in forest ownership and the relations existing between the lumbermen and the State. Canadian foresters may, of course, learn much from the foresters of Europe, and will doubtless learn much more from those of the United States, where many of the conditions are very similar, but in the end they must work out their own salvation by the development of a system of Canadian forest management designed especially to meet Canadian forest conditions.

Stock-Taking of Timber Resources.

As a first step in this direction it will be the duty of the Provinces to undertake a systematic stock-taking of their timber resources, for without a knowledge as to what they have in the way of standing timber, any attempt at forest management must be blind and ineffective. The stock-tak-



—Courtesy of the U.S. Forest Service
Minnesota Pinery, lumbered under the direction of the U.S. Forest Service. The burning of the brush was accomplished without injury to the seed trees left standing, and at a cost of 15 cents per thousand feet board measure of the timber cut.

ing will naturally include the kind, quantity, quality, state of maturity, rate of growth, and location of the standing timber; the character of the soil and its adaptability for growing particular kinds of timber; and a more or less complete topographic survey having special reference to the drainage, character of the surface and such other features as would be of importance in planning logging operations.

Knowing, then, *what* there is and *where* it is, and how it may be gotten out, the next step will be to limit logging operations as much as may be practicable to districts where the stands are mature or overmature. The mature timber must be sold under such conditions as will conserve alike the interests of the lumbermen and those of the Province. The price paid for the logs must be made with the clear undertaking that they are to be removed under such rules and regulations as will insure the reproduction and future safety of the forest. These rules and regulations must naturally be prepared and published in advance of the sale, that the purchaser may know definitely at the time of the sale the conditions under which he is to conduct the logging operations.

The Lumbermen and Forestry.

Lumbermen are more interested in the perpetuation of the forests than any other class of citizens; and in any square deal will be found willing to do their share to that end. It is high time, however, that the Canadian Provinces ceased to sell the public timber under a system which makes it in the present financial interest of the logger to despoil the forest. Were the stumpage sold in a proper and business-like way, there would be no need to implore the lumbermen to think of the nation's posterity rather than his own, a plea which must always be futile; besides it is perfectly practicable to conserve and harmonize the interests of the lumbermen and the public, present and future.

Trained Foresters Necessary.

Systematic care of forests implies of course a trained forest service.

There was a time when the doctor's office, the court room, and the deck of a ship were the only places of training for the physician, the lawyer, and the naval officer, just as to-day the lumber camp is the only place of training for those who at present direct the cutting of the Canadian forests. But the world has made progress in educational matters in the last fifty years, and to-day we have, established and maintained by the State, military and naval academies, schools of law and medicine, of mining, engineering, agriculture, and other professional and technical schools too numerous to mention.

With her vast interests in forests and forest products there can, I think, be little doubt but that the time has fully come for the establishment of a Canadian School of Forestry for the training of her coming forest service.

A Practical Forestry Training.

Time does not permit me to discuss in any detail the character of the instruction which should be given at such a school. In very brief, I would say that a broad elementary training in the so-called natural sciences and mathematics is the most necessary preparation for the forester's professional training. That the professional training must be as *practical* as possible goes of course without saying. To this end all theoretical instruction must be supplemented by practical investigation and application in the woods. I would go farther and recommend that on the completion of

their school work—theoretical and practical—all students who have not previously had a practical training in the lumbering business be required to associate themselves with a lumber firm for a year for the purpose of studying and practically assisting in the various operations from the felling of the tree to the grading of the lumber for the market. This training will prove of value to students not alone in the matter of information gained, but will serve the useful purpose of bringing the foresters and the lumbermen in touch personally and professionally.

Assistance for Private Owners.

The educational side of a national forest policy would be incomplete without provision for the dissemination of a knowledge of improved methods of woodland management for the benefit of the private owners, who control in the aggregate many million acres of woodlands, which, scattered as they are throughout the agricultural sections, are acre for acre the most valuable of Canadian forest lands. The Ontario Department of Agriculture and the Dominion Forestry Branch have already made an excellent beginning in this great educational work.

Such, in brief, is a glimpse of Canada's responsibility, opportunity and duty. As we accept our responsibilities, and as we do our duty according to our opportunity will we be judged by future generations, as having been worthy or unworthy custodians of an almost unbounded natural resource.

SHOULD STUDY THE ENGLISH MARKET.

Canadians are inclined to criticize Englishmen for attempting to sell goods in this country that are not suited to our requirements. Apparently we are sometimes guilty of attempting to do the same thing in England. In this connection, Mr. P. B. MacNamara, Canadian Commercial Agent in Manchester, writes to his department under date of December 15th, as follows:

It is a matter of the greatest importance to the Canadian manufacturer who expects to do an export trade with this country, that he should study the requirements of the wholesale market. I fear it is too often taken for granted that goods made for the Canadian market will satisfy the English buyer, but this is not borne out by facts. It has been impressed on me by travellers representing Canadian firms that the trade here requires the very cheapest grade of goods, in order to compete successfully with continental and United States makers in the same line. Whilst larger profits are looked for by both wholesale and retail dealers here, the former is only prepared to buy goods at a price to enable him to sell at a considerable profit.

The building trade well represents a section that absorbs large quantities of manufactured goods, and houses at rentals of from £27 to £35 per annum are erected in rows occupying whole squares of land so quickly and cheaply that only the very cheapest materials are used. In the matter of trade discounts, where the Canadian article was offered at 7½ per cent, a traveller was told that 20 per cent. was given by United States makers of the same line, and this could only be done by giving cheaper grades. It is therefore a difficult matter for a Canadian traveller to meet with the success he expects in effecting sales in this country. Unless the manufacturer he represents will take advantage of his experience of the trade requirements, and conform to them, his success will be seriously hampered.

CANADIAN PORTS FOR CANADIAN TRADE.

To the Editor, INDUSTRIAL CANADA:—

I FIRMLY believe that there exists to-day throughout the Dominion a vigorous national sentiment, and anything which tends to foster and strengthen the spirit of unity will receive favorable consideration from the leaders in commercial and industrial life.

On account of the unique geographical position of Canada, extending as it does over a vast area, and in close proximity to the United States upon the whole of her southern boundary, the various questions relating to transportation must necessarily for a long time present many difficult problems, and our future as a nation depends upon the manner in which these problems are grappled with and settled.

That the question of transportation has been considered of first importance in the past by the various Dominion Governments is shown by the history of the country since Confederation. Large sums of public money have been spent upon the Intercolonial Railway, the Canadian Pacific Railway, the Ontario canal systems, and on the St. Lawrence route. In the last Dominion elections the people from Atlantic to Pacific have endorsed the expenditure of at least one hundred million dollars for the Grand Trunk Pacific Railway, in addition to these and other subventions in the interior. The country is paying heavy subsidies to various steamship lines running to Great Britain and elsewhere; but in spite of her heavy subscriptions to transportation enterprises, Canada is unable fully to control either its import or export trade.

The question of the Tariff and that of Transportation are very closely related.

The trade of a country usually finds its way to its destination through those channels under the domination of the largest aggregation of capital, and those channels as far as Canada is concerned, are nearly all upon the south side of the international boundary. This applies to both the import and export trade, with the difference that while the export trade of the country is to a great extent beyond the control of the Government, the imports can be directed by means of the tariff. At the present time, even during the open season of the St. Lawrence route, a large proportion of the trade of Canada is conducted over United States railways, and via United States ports, but during the winter months these foreign ports take nearly all of it. If a change is made in our tariff giving a preference on all goods entering Canada direct from the country of origin, or in which they are manufactured, the effect would be at once apparent and far-reaching. Instead of having to pay heavy steamship subsidies to induce the companies to come to our ports, ocean carriers would have to come to Canadian ports, and Canadian railways would be kept busy. The entire import trade of the country would be transferred from foreign to Canadian channels, and the export trade would surely follow.

The proposal to allow a preference to goods coming in through Canadian ports originated, I understand, with the Canadian Manufacturers' Association, in a suggestion at a meeting held February 11th, 1901, that the Customs rebate of 33 1-3 per cent. on goods manufactured in Great Britain be allowed only when said goods are landed at Canadian ports. It has been considered and endorsed in principle by the Boards of Trade of Montreal, Toronto, Winnipeg, St. John, and Halifax, and during the past year the following resolutions have been adopted.

St. John Board of Trade, January 17th, 1905.

"RESOLVED that this Board is of the opinion that all "preferential rebates off customs duties which are allowed "in connection with Canadian imports should only apply to "goods that are imported through Canadian seaports and in "British registered vessels."

NOVA SCOTIA BRANCH, CANADIAN MANUFACTURERS' ASSOCIATION, April 10th, 1905. "WHEREAS a large portion of the goods imported into "Canada now enter via foreign ports, and are carried over "foreign railway lines, therefore co-operation is asked from "the Canadian Manufacturers' Association, various boards "of trade and other representative bodies, in pressing upon "the Dominion Government the desirability of framing the "tariff that there shall be a customs preference on all goods "which enter Canada direct from the country of their origin, "also on all goods entered at Canadian ports when carried in "British shipping."

MONTREAL BOARD OF TRADE, March 13th, 1905, "RESOLVED, that the Dominion is hereby asked to endeavor to procure such amendments of duty on French "goods, only when they are imported on through bills of lading, stating point of destination, and consigned directly "from the original point of shipment to a person or firm in "Canada."

There has been a good deal said and written recently about the deficit on the Intercolonial Railway. Here is a practical method of decreasing those deficits, if not of abolishing them altogether.

It is, we are persuaded, fully conceded that the policy of the Canadian people must be a national one, and that the tariff should be framed to protect Canadian labor.

Why should this principle not be applied to encourage Canadian trade through Canadian channels? It is said that the chief, and in fact, the only serious objection to having the principle indicated embodied in our tariff, comes from Ontario. It seems unreasonable to us in the Eastern Provinces that any such opposition, and even apathy, should exist, especially on the part of protectionists. It is based upon sound protectionist doctrine, namely, to protect Canadian interest against unfair competition, and to retain the trade of the country for those who are carrying Canadian burdens, no matter in what section of the Dominion they may be located.

An amendment to the tariff embodying the principle indicated in these resolutions would be a benefit to the Maritime Provinces, and apparently about the only one which can accrue to them from Confederation.

An objection which has been raised to the proposal is that it would give the entire trade to a few steamship companies and shut out competition, but it would, I believe, have the contrary effect, for the trade would be of sufficient magnitude to bring competing lines to our shores. The steamship and railway services of the country would be greatly improved in order to handle the increased traffic.

The home market is the best market. We are mutually interested in the welfare of the whole Dominion. We are interested in every section having a large population of contented people, for it means larger markets and greater general prosperity.

I appeal to my fellow-members of the Canadian Manufacturers' Association to take this question up promptly and seriously, and if, after viewing it from a broad, national standpoint, they are convinced of the soundness of the principle, to advocate its adoption in the coming revision of the tariff.

W. J. CLAYTON.

Halifax, January 18th, 1906.

THE GROWTH OF CANADA, 1868 TO 1904¹

By GEORGE JOHNSON, D.C.L., F.S.S., Dominion Statistician

	1868	1870	1875	1880	1885	1890	1895	1900	1904	
1 Gross Debt	\$96,896,666	115,993,706	151,663,401	194,634,440	264,703,607	286,112,295	318,048,755	346,206,980	364,962,512	1
2 Assets:	\$21,139,531	37,783,964	35,655,023	42,182,852	68,295,915	48,579,083	64,973,828	80,713,173	104,094,794	2
3 Taxation, Customs	\$ 8,578,380	9,334,213	15,351,012	14,071,343	18,935,428	23,968,954	17,640,466	28,374,148	40,702,611	3
4 " Excise	\$ 3,002,588	3,619,622	5,069,687	4,232,427	6,449,102	7,618,118	7,805,733	9,868,075	12,958,708	4
5 Exports, Total	\$57,567,888	73,573,490	77,886,979	87,911,458	89,238,361	96,749,149	113,638,803	191,894,723	213,521,235	5
6 " Fisheries	\$ 3,357,510	3,608,549	5,380,527	6,579,656	7,960,001	8,461,906	10,692,247	11,169,083	10,759,029	6
7 " Mine	\$ 1,276,129	2,192,541	3,643,398	2,831,163	3,627,211	4,853,757	6,981,550	24,575,155	33,618,944	7
8 " Forest	\$18,262,170	20,940,434	24,781,780	16,854,507	20,989,708	26,179,136	23,891,166	29,663,668	33,091,922	8
9 " Agricult ¹ Products	\$12,871,055	13,676,619	17,258,358	22,294,328	14,518,293	11,908,030	15,719,128	27,516,609	37,138,875	9
10 " Animals and their Products	\$ 6,893,167	12,138,161	12,700,507	17,607,577	25,337,104	25,106,995	34,387,770	56,148,807	63,812,117	10
11 " Manufactures	\$15,594,622	18,309,751	20,006,823	16,214,011	19,280,901	25,536,804	26,198,924	39,397,277	48,033,722	11
12 Imports, Total	\$73,459,644	74,814,839	123,070,283	86,489,747	108,941,486	121,858,241	110,781,682	189,622,513	259,211,803	12
13 " Home Consumpt ⁿ	\$71,985,305	71,237,603	119,618,657	71,782,349	102,710,019	112,765,584	105,252,511	180,804,316	251,464,332	13
14 " Dutiable H. C.	\$43,655,695	45,127,422	78,138,511	54,182,967	73,269,618	77,106,286	58,557,655	104,346,795	148,909,576	14
15 " Free H. C.	\$23,434,463	21,774,652	39,270,057	15,717,575	26,486,157	34,576,287	42,118,236	68,160,083	94,680,443	15
16 " Woollen Manuf ^s	\$ 7,667,335	6,968,552	12,767,575	6,296,699	9,057,833	11,017,261	7,952,932	9,501,565	15,159,383	16
17 " Cotton	\$ 7,675,433	7,339,992	9,830,836	7,750,871	6,106,887	3,970,736	4,218,168	6,506,569	8,542,978	17
18 " Silk	\$ 1,009,365	1,281,248	2,219,160	1,816,375	1,851,178	2,155,060	1,675,151	3,185,369	3,715,037	18
19 " Iron and Steel Manuf ^s	\$ 6,885,365	7,750,867	18,199,198	10,128,660	11,415,713	13,623,737	9,249,749	29,300,073	41,152,789	19
20 Banks, Discounts	\$52,299,050	66,276,961	136,029,307	102,166,115	126,827,792	153,301,335	203,730,800	279,279,761	407,475,439	20
21 " Banks, to the Public Deposits ²	\$33,653,594	48,763,205	74,642,446	85,303,814	104,014,660	135,548,704	190,916,939	305,140,242	424,969,215	21
22 Building & L. Co's Deposits. \$	\$ 959,051	1,942,575	5,020,507	11,713,633	15,435,084	17,893,567	19,945,944	19,959,462	19,958,641	22
23 Dep'ts in Gov't S. Sav. Banks	\$ 5,057,607	8,780,522	13,782,597	17,733,980	42,170,971	51,921,452	57,578,981	68,575,195	85,221,593	23
24 Deposits payable after notice in Chartered Banks	\$	29,915,062	28,431,855	33,970,295	51,710,549	76,635,177	114,512,523	181,045,944	307,007,192	24
25 Failures in Business .....	\$ .....	.....	28,843,000	7,988,000	9,210,334	12,482,000	15,347,931	10,786,276	10,018,299	25
26 Railways	2,522	2,679	4,856	6,891	10,150	13,256	15,941	17,481	19,431	26
27 " Receipts .....	\$ .....	.....	19,470,539	23,561,447	32,237,469	46,843,826	46,655,883	70,231,979	100,219,436	27
28 " Expenditure .....	\$ .....	.....	15,775,532	16,840,705	24,015,351	32,913,350	32,687,035	47,405,596	74,563,162	28
29 Shipping, Seagoing and Lakes	12,982,825	11,415,870	9,527,455	13,577,845	14,084,712	18,446,100	19,100,963	26,914,095	31,202,205	29
30 " Coasting Trade .....	.....	.....	310,300,939	14,053,013	15,944,420	22,797,115	25,473,434	33,631,730	45,505,122	30
31 Coal Production	623,392	734,285	1,039,974	1,482,714	1,920,977	3,084,682	3,478,344	5,608,666	7,509,860	31
32 Gold	2,773,527	1,724,348	2,693,533	1,304,824	1,148,829	1,149,776	2,083,674	27,908,153	16,400,000	32
33 Bank and Dominion Notes in Circulation	\$13,915,037	22,627,053	33,908,271	36,095,582	46,143,991	48,335,871	52,204,791	73,125,245	105,134,725	33
34 Capital of Factories (five hands and over) .....	.....	.....	.....	{ 137,464,423	.....	{ 296,350,316	.....	{ 441,053,060	.....	34
		1871	.....	{ \$31.80 p. head	.....	{ \$62.00 p. head	.....	{ \$82.00 p. head	.....
		43,485,761	.....	1881	.....	1891	.....	1901	.....
35 Population .....	.....	.....	.....	4,324,810	.....	4,833,239	.....	5,371,315	.....	35

Fiscal Years, ending 30th, June.

Calendar Years, ending 31st, December.

For 1876.

Four Provinces only.

AMONG THE INDUSTRIES

The Miramichi Lumber Company will build a new rossing mill at Chatham, N.B., in the spring. The mill with machinery installed will cost about \$50,000, and will give employment to sixty men.

Messrs. Frankel Bros., of Toronto, have purchased a block at the corner of Eastern Avenue and the Don improvement, 334 x 500 feet, on which they purpose building a large warehouse and factory.

A considerable quantity of new nail-making machinery is under construction at the Maritime Nail Works, and will shortly be ready for installation. When set up it will increase the capacity of the mills 75 per cent.

A proposal is on foot in Galt to transform the old biscuit works into a whitewear factory. Another new industry for the town will be a glove factory, to be erected by Mr. Osgood at the rear of his present premises.

The season just closed has been a most profitable one for the herring fishermen of Yarmouth and Lowestoft, whose catch for the past three months has run up to more than 130,000-tons. Its value is estimated at \$2,750,000.

Plans have been completed for the new railway shops to be built by the Canadian Northern Railway in Winnipeg, and only await the approval of the directors before construction work begins. It is estimated that they will cost in the neighborhood of \$800,000.

The Grand Trunk Railway recently placed orders for eighty-one new locomotives, representing a total cost of \$1,398,000. The Locomotive & Machine Company, of Montreal, and the Canada Foundry Company, of Toronto, are understood to have captured the lion's share of the contract.

A soap factory is the latest acquisition to Vancouver's growing list of industries. It will be built as a branch establishment by one of the largest soap manufacturing concerns of the Middle West. Those behind the enterprise expect to be able to do a big trade with the Orient.

Work on the Fort Frances power development project is reported to be progressing favorably. By spring the large cofferdams will be completed, after which the powerhouse and pulp mill will be pushed forward as rapidly as possible. Power, it is expected, will be ready for delivery in August next.

The Restigouche Woodworking Co., Limited, have recently completed a plant at Dalhousie, which is said to be the most modern of its kind in New Brunswick. It occupies a whole block, with the Intercolonial on one side, and wharves on the other. Mr. W. S. Montgomery is President and General Manager.

The Eagle Knitting Company, Hamilton, has decided to build an immense new factory at the corner of Wilson and Sanford Avenues. The present factory at the corner of Macnab and Main Streets is too small for the company's business, and they will rush the work of building the new plant as rapidly as possible.

The Peterborough Cereal Company will soon have in operation a gas plant of its own. This step has been rendered necessary owing to the large quantities of gas consumed in toasting their well-known line of breakfast foods. The equipment is being installed by the Gas Supplies & Construction Co., of Toronto.

Messrs. Lentz & Co., of Buffalo, a firm engaged very largely in the manufacture of marble work for interior decoration, are reported to be considering the establishment of a branch factory in Canada. Montreal, Hamilton, and St. Catharines are spoken of as possible locations, with chances strongly in favor of the latter.

Supplementary letters patent have been issued to the Cobban Man'g Co., Limited, of Toronto, changing the name to that of the Phillips Manufacturing Co., Limited. The business will be carried on under the same management as before, who propose to mark the change by the immediate erection of a large addition to the factory.

The industries of Collingwood are looking forward to a busy season. According to the *Contract Record*, the Farrar Transportation Company will build a 9,000 ton steamer there during the present year. The Imperial Wire and Nail Works have plans out for extensive additions to their plant, and the Collingwood Furniture Company also purpose extending their premises.

A big consolidation of mining interests is said to have been effected between the St. Eugene and Centre Star Mines, the Trail Smelter and the Rossland Power Co. A number of Torontonians are credited with bringing about the merger. The new concern will be known as the Canadian Consolidated Mines, Limited, and will be capitalized at \$5,500,000.

The Simonds Manufacturing Company, saw and knife makers, with factories at Fitchburg, Mass., and Chicago, Ill., have taken over the business of the Canada Saw Company, of Montreal, St. John, Ottawa, and Toronto. The new company will be known as the Simonds Canada Saw Company. About \$250,000 is involved in the merger. No immediate changes are planned, though it is expected that enlargements will be made in the near future.

Trouble has arisen between the Dunnville rate-payers and the Dominion Gas Company over the persistent manner in which the company has set about exhausting private wells. At a public meeting held a few weeks ago it was decided to appoint a commission to conduct a municipal gas plant. At present the townspeople are paying 25 cents a thousand feet, but it is expected that under the public ownership system the price will be reduced to 10 cents.

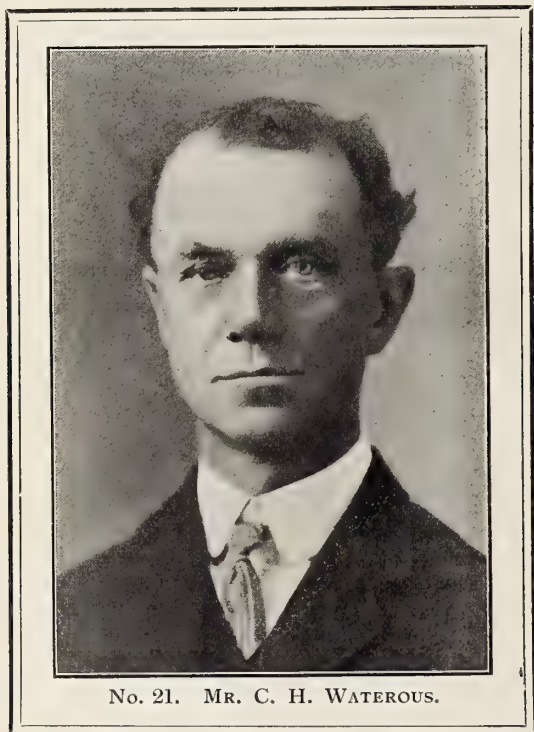
Large iron and steel furnaces and mills, where the enormous magnetic ore deposits of the Coast will be reduced and turned into manufactured product by a recently discovered electrical process of treatment, are planned to be erected at Eburne, B.C., on the north arm of the Fraser River. The project also embraces the erection of a lead pipe and wooden pipe factory, and two large saw mills at the same place. Vancouver and Victoria people, backed by unlimited English capital, are behind the scheme.

The Metal Shingle & Siding Co., Limited, of Preston, Ont., who are among our new advertisers this month, expect to put up a large new building as an addition to their plant during the present year. It will be remembered that they had the misfortune to be burned out in the summer of 1904, and again in the fall of the same year, while occupying temporary quarters. The wonderful progress which they have made in the face of difficulties speaks well for the pluck and enterprise of the men at the head of the concern.

THE MANUFACTURERS OF CANADA.

IF there is one thing more than another which may be said to be characteristic of the people of Brantford it is the intense spirit of local patriotism with which they are imbued. And it certainly speaks well for the affectionate regard in which the Telephone City is still held by the sons of her birth when a man of Mr. Waterous' penetrating judgment, after visiting the fairest spots of three continents, comes back to take up his permanent residence amidst her peaceful surroundings.

Charles H. Waterous was born in Brantford in the year 1851. His early education was received in the public schools of his native city, after which he took a course at Dr. Tassie's celebrated school in Galt. At the age of nineteen he entered upon a business career, taking service as an apprentice with the Waterous Engine Works Co., at that time presided over by his father. Here he was given a splendid opportunity to become thoroughly familiar with the



most approved type of foundry and machine shop practice, and some years were spent in the office, in the works, and at outside construction, mastering the details of a business he was one day to manage.

In 1875, when the steady expansion of the company's export trade made it necessary for them to have representation abroad, Mr. Waterous went to South America, travelling in turn through every country and calling at every centre of importance in the interests of his firm. Later he visited Europe in a similar capacity, pushing the sale of Waterous goods with marked success. After an absence of several years he returned to Brantford, and it was not long before he was called upon to assume the active management of the entire business.

The industry over which he presides is one of the largest of its kind in Canada. It represents an invested capital of \$250,000, has an annual output valued at \$750,000, and provides employment to 525 hands the year round. Engines, boilers, saw mill and wood-working machinery, pulp

machinery, fire apparatus, and road rollers are among the principal lines manufactured, all of which bear an enviable reputation.

Outside of the engine works Mr. Waterous' only business connection is with the Beaver Oil & Gas Company, and the Adams Waggon Company, in both of which concerns he is a director.

By his friends he is regarded as a man of the kindest disposition, whose advice and assistance can always be relied upon when perplexing questions arise. Possessed of shrewd judgment, and broad-minded to a degree, he is ready at all times to accept the responsibilities devolving upon a man in his position. For three years he served as Alderman in the Brantford City Council. Last year his friends persuaded him to assume the duties of Mayor, which he did at great personal sacrifice. For the present year he has been re-elected by acclamation, a fact which of itself speaks volumes for the esteem in which he is held by his fellow-townsmen.

FOREIGN TRADE NOTES.

Brazilian Exhibition.

American manufacturers are invited to participate in an international exhibition which it is proposed to hold in Brazil in 1908, in commemoration of the centenary of the opening of the ports of Brazil to the commerce of the world. The official body in charge of the project is the Commercial Association of Rio de Janeiro, which city has been selected for the exposition. It is pointed out that Germany and England get a large percentage of Brazil's import trade in manufactured articles, and that this exposition will afford a good opportunity to American manufacturers to advertise their wares in the Southern Republic. By the end of next year (1907) it is expected that steamship communication between the United States and Brazil will be largely increased by the services of the new Brazilero Lloyd Company.—*International Bureau of American Republics.*

Canned Goods in Mexico.

I wish to call attention to a very satisfactory shipment of Canadian corn lately received by one of the large houses here. The quality is all that could be desired, and a noted improvement upon that received in previous years. There is but a limited business to be done in Mexico in canned fruits and vegetables, as it is always possible to procure fresh fruits and vegetables of some kind in the markets. However, many mining and construction camps depend to a great extent on the imported canned article, and it will always be worth while to compete for this trade.

In connection with the canned goods trade, I wish once more to refer to the question of labels. Canadian canners could very materially increase their trade in this market if they would follow more freely the example set them by their American neighbors in the matter of an attractive package. This applies with equal force to fruits, vegetables, fish and meats. Very few people know anything about the merits of this or that particular brand, and an attractive package will always receive the preference when there are the two to choose from.—*Canadian Commercial Agent, Mexico.*

Carriage Woodstock and Sundries in Australia.

It is to be regretted that Canadian manufacturers of carriage woodstock have not, to any extent, yet succeeded in securing a portion of the large Australian trade in carriage builders' materials. Samples of Canadian carriage wood-

stock shown in Melbourne do not as yet meet the requirements of the local trade or the competition of United States makers as regards values. This trade is an important one, and well worth the serious attention of Canadian manufacturers and exporters.

While the Commonwealth tariff imposes a duty of 25 per cent. upon finished carriages, the principal lines of carriage woodstock and minor articles of hardware required by Australian vehicle builders are admitted free of duty. To a very great extent Australian carriage builders, so far as the better class of light rigs are concerned, assemble the imported sundries, and complete a rig almost entirely of overseas parts. The labor in assembling the parts, painting and turning out a vehicle suitable for local conditions constitutes, in the main, the work of the Australian mechanic. This will always be the case, as Australia has no wood suitable for making light road rigs.

Some Canadian manufacturers of carriage springs are exporting considerable quantities of their goods to Australia, chiefly through New York commission houses, and in Melbourne, and doubtless in other importing centres, they are in good demand, owing to their excellence of workmanship and suitability for local vehicle builders. This trade, from enquiries which I have made, is capable of further expansion.

The principal materials required by Australian carriage builders are as follows: Sarven wheels, hickory rims, spokes, singletrees, doubletrees, poles, shafts, hickory for gearing under rigs, elm hubs (a leading line), waggon bows, etc.—*The Canadian Commercial Agent, Melbourne.*

Cotton Possibilities in Mexico.

On account of the constant fluctuations in the price of cotton on the American market, and of the terrible gambling that takes place in this commodity, the manufacturers of textile goods in Mexico have for some time been alarmed for the safety of their industries, says the *South American Journal*. The internal consumption of the United States is increasing very considerably, and American cotton has a tendency to become scarce in the markets of the world. Mexican manufacturers, therefore, have of late been giving a great deal of thought to the question of growing cotton at home. It is already cultivated to some small extent, the crop for 1905 being estimated at 100,000 bales. Compared with United States cotton, it is said to be superior, the plants individually being more productive and the fibre attaining a greater length.

In all the States of the Republic there are to be found vast tracts of magnificent land suitable for cotton cultivation on a large scale, and all that is needed is men of enterprise to employ their capital in so profitable an industry. That this will soon occur seems likely, for the announcement is made that a prominent Manchester firm has recently secured a large tract of land in the State of Tamaulipas, near the Rio Grande, which they will irrigate and devote exclusively to cotton cultivation, and other companies may be expected to follow in their lead should the venture prove a success, as it undoubtedly will.

LITERATURE FOR BUSY BUSINESS MEN.

The Labor Movement.—By L. T. Hobhouse, T. Fisher Unwin, 3rd impression, 2nd edition, pp. viii, 98.

This little shilling volume gives a very favorable review of trades unions, co-operation, and the movement towards public ownership. No doubt whatever that all three have

aided greatly in the progress of society. All three have made mistakes, at times very serious ones; but on the whole they have been as blessings, even if to many they have appeared as blessings in disguise. This is, however, no excuse for mistakes on the part of unions to-day. With all the experience of the past and all the responsibilities of the present there is little excuse for unduly arbitrary measures now. Labor leaders should be selected with great care by the unionists so that their cause is not prejudiced and injured. The author of the present book suggests as the great, "the only corrective open to mankind,"—free criticism. But political, business and other influences often muffle the press and the legislator, and the panacea of free criticism often becomes a delusion and a snare. It is this very fact that threatens the solidity and permanence of many social institutions to-day.

The Walking Delegate.—By Leroy Scott, Montreal News Co., \$1.50. pp. 372.

Is an exciting up-to-date story, interspersed with love and war which shows a good deal of knowledge of modern unions and their ways. It first appeared in magazine form. The scene is laid in New York, and its fidelity to life has been confirmed by the investigations of unionist corruption last year. Though a highly pitched story, it cannot help but interest and instruct workman and employer alike.

The Philippine Islands.—By F. W. Atkinson, first General Superintendent in the Philippine Islands, Ginn & Co., New York, 1905, pp. 426.

It may be true, and probably is, that after the first flush of victory, the American people would have gladly relinquished their new possessions. The islands themselves are very mountainous and unhealthy for Europeans, although Manila has been made already a somewhat pretentious modern city; the 7½ millions of population is divided up, according to the Spanish, among 35 groups, speaking different languages; while, finally only 11 of the 1,600 islands have an area of over 1,000 square miles. As for natural resources, no minerals of importance have been found. Hemp, tobacco, sugar and copra (dissected coconut meat) are the chief articles of export, though some coffee, chocolate, corn and indigo are also sold to foreign markets. Government experiments, and encouragement may make these and other natural products yield bigger harvests, but the islands will never be other than producers of raw material. The people, as indicated by their languages, are of various and often hybrid origin—an interesting field for ethnological study—from the Igorots, who are a powerful tribe, down to the Negrito, who with broomstick legs are physical and mental weaklings, and almost the smallest race on the globe to-day.

What is the United States going to make of these islands of the tropic seas and of their heterogeneous peoples? That is the question all Easterners are asking. There is no turning back now until some years of experiment have been passed. No European country, England not excepted, has seriously tried to civilize and modernize a tropical population. Can the United States succeed? She is bringing to bear all the forces of modern education, government, and commerce. If she does succeed, she will have given the world an object lesson, so important that its influence could hardly be overestimated. If she fails, European nations will be confirmed in their past policy of subordinating their Eastern subjects as of a lower mental and moral order. The present book, though most unsystematic in arrangement, is replete with information on past and present conditions.

TRADE ENQUIRIES.

NOTE.—For further information regarding any enquiry mentioned under this heading or the names of enquirers, apply by number to the Secretary, at Toronto.

- 188 **AGENCIES, Europe.**—A correspondent in **Montreal**, who for the last 12 years has been representing one of the foremost European concerns in Canada, is now desirous of returning to Paris, and would like to be placed in communication with Canadian manufacturers wishing to appoint a responsible European representative. He is 39 years of age, French, but writes and speaks English, Spanish and German. References are forwarded.
- 189 **Japan.**—A Canadian resident in **Japan** desires to communicate with Canadian manufacturers who wish to introduce their goods into that country.
- 190 **Leicester, England.**—A correspondent in **Leicester, England**, writes that he is in a position to take up a few good agencies of Canadian firms connected with the grocery trade, particularly for the Midlands district.
- 191 **Apples, (Green), Dried Cod.**—A **London, England**, firm desires to get into communication with Canadian exporters of dried cod and green apples.
- 192 **Asbestos.**—A correspondent in **Paris, France**, asks for the names of manufacturers of asbestos in sheets.
- 193 **Blanks, (Ash and Maple).**—An enquiry has been received from **London, England**, for the names of manufacturers who can supply ash and maple cut to lengths for billiard cue blanks. These blanks are cut square, 5 ft. long, and 1½" square at the bottom, tapering to ¾" square at the top.
- 194 **Blocks (Mangle Roller).**—**Lancashire, England**, manufacturers of mangles, now obtaining the bulk of their supplies from the United States, would welcome correspondence from Canadian producers of mangle roller blocks in sizes 22 inches, 26 inches and 32 inches, x 5¾ inches and 6½ inches.
- 195 **Bones and Hoofs.**—A **Japanese** firm wishes to be put in communication with Canadians prepared to undertake the export to Japan of cattle bones and hoofs, that is, leg, round, shank, and buttock bones, etc., for the manufacturing trade.
- 196 **Cases, (Packing).**—A **Midlands, England**, manufacturer asks to be placed in correspondence with Canadian manufacturers of packing cases as used for packing glass goods.
- 197 **Carriage Builders' Supplies.**—A **Melbourne, Australia**, firm dealing only in carriage builders' requirements, desires price lists and full particulars of high grade Canadian carriage woodstock, suitable for light and heavy vehicles. Quotations for wholesale quantities upon an f. o. b. steamer, New York basis.
- 198 **Clothes Pins and Broom Handles.**—A **British** firm in **Cradley**, wishes to buy the above.
- 199 **Elevator Equipment.**—A **South American** firm of contractors with bank references, desire to get into communication with suppliers of plant for grain elevators of a capacity of 1,000 to 5,000 tons, also cleaning and drying machinery.
- 200 **Flour and Provisions.**—A commission agent in **Leicester, England**, is seeking the representation in England of Canadian firms exporting hog products, flour, etc.
- 201 **Flour, Hay, General Groceries, and Confectionery.**—A **London, England**, firm is open to represent Canadian shippers of the above lines on commission or salary.
- 202 **Furniture (Office) and Wall Paper.**—A **London, England**, firm is prepared to represent Canadian manufacturers of office furniture, cabinets, files, and also of wall papers suitable for the United Kingdom trade.
- 203 **Handles, (Pick).**—A **Birmingham, England**, firm wishes to get in touch with Canadian firms open to sell pick handles.
- 204 **Hardware.**—A **Glasgow, Scotland**, house is desirous of obtaining the representation of a good firm of Canadian manufacturers or exporters in any hardware lines that would command a sale in Scotland.
- 205 **Hardwood.**—A **London, England**, timber agent with a large connection, desires an agency for Canadian hardwoods for building purposes. Is prepared to invest \$2,500 if required in substantial agency.
- 206 **Hay, Baled.**—A **Manchester, England**, firm desires to correspond with Canadian exporters of baled hay.
- 207 **Lumber (Ash).**—Enquiry has been made by a **Yorkshire, England**, timber agent, for names of Canadian manufacturers of dimension ash.
- 208 **Milk, (Condensed), Canned Goods, Dried Fruits and Vegetables.**—A **London, England**, firm, possessing a wholesale connection, could handle a Canadian brand of condensed milk, and would also like to get into touch with Canadian producers of canned goods and dried fruits and vegetables.
- 209 **Paper (Wall).**—A large **Capetown, South Africa**, importer of wall paper desires to correspond with a Canadian manufacturer of this article.
- 210 **Phosphate, (Rock).**—A prominent **Japanese** importing firm wishes to be put in communication with Canadian merchants interested in the exportation of the above.
- 211 **Planks, Birch and Maple.**—A **Manchester, England**, manufacturer wishes to obtain prices of birch and maple planks 2" to 3" thick, from Canadian shippers of same.
- 212 **Poles (Cornice).**—A **Manchester** importer wishes to do business with Canadian manufacturers of cornice poles with ends turned.
- 213 **Presses, (Hay Baling).**—A firm of exporters in **New York City** desire to correspond with manufacturers of power presses for baling oat hay. They wish to sell on commission, delivery to be made **New York, Montreal, or St. John**, cash payments.
- 214 **Rubber Goods.**—A **South African** firm desires to communicate with a Canadian manufacturer of moulded rubber goods.
- 215 **Skewers (Butcher), and Dowel Sticks.**—A **Midland, England**, firm wishes to buy the above.
- 216 **Soap Materials.**—A firm well known to the Association in **Liverpool, England**, write stating that they are prepared to act as buying agents in England on a commission basis for soapmaking material, including cocoanut oil, palm oil, palm kernel oil, sulphur olive oil, etc. This firm deal largely in this class of goods and can supply all requirements.
- 217 **Starch.**—A **London, England**, firm desires the addresses of Canadian manufacturers of rice starch.
- 218 **Tallow.**—A **Lancashire, England**, manufacturer desires prices of white and bone tallow from Canadian shippers of the same.
- 219 **Tallows and Fats.**—A **Manchester, England**, firm asks to be placed in communication with Canadian producers of the above who seek an export outlet.
- 220 **Timber.**—A large **Johannesburg, South Africa**, firm importing timber desires correspondence with Canadian exporters of this article.

The 1906 FORD RUNABOUT

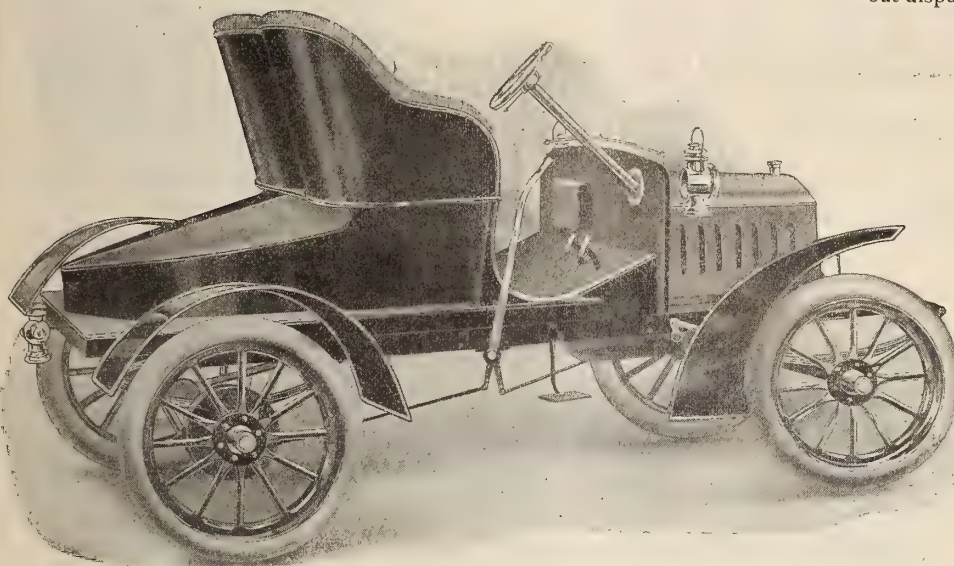
THE greatest ambition of Mr. Henry Ford, America's pioneer automobile designer, has been to produce at a minimum cost, a car complete and substantial in every detail, built with a view to economy but not to the exclusion of strength and endurance.

The production of the new **Ford Runabout** now on the market for 1906 is without dispute the greatest stride the automobile world has ever seen towards minimizing the cost of construction and up-keep in the motor car.

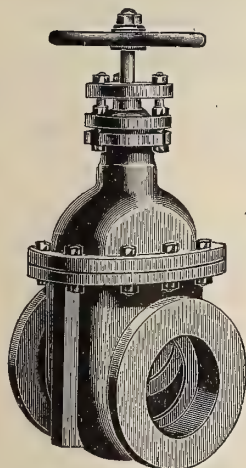
This car has a 4 cylinder 15 H. P. engine, with a speed range of from 3 to 40 miles per hour on high gear. Weight only 700 pounds. Divided seats for two persons.

Equally important to automobile advancement is the introduction of the **Ford 6 cylinder Car**. This car proves conclusively that the multiplication of cylinders when accompanied by simplicity of design, not only increases the flexibility and power of the car but reduces the automobilist's troubles and increases his confidence in his ability to always "get there" on time.

For further information regarding our 1906 Cars write—



The Ford Motor Co. of Canada, Limited, Walkerville, Ont.



You are Wasting Your Money

When you invest it in cheap, unreliable valves. It is only a matter of time before they get out of order, or play out altogether. You have to buy good ones in the end, and meanwhile you are incurring extra expense for steam-fitting charges.

"Kerr" Stands for Quality

and reliability in a valve. One trial of KERR VALVES will convince you that they are the best and cheapest in the long run. Catalogue on application.

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We insert all Business Houses, Manufacturers, and Professions in Canada under their respective headings free of charge.

This work will contain from 800 to 1,200 pages. Size of page 10 x 13 inches.

We will have a circulation that will cover all Canada. There are over 250,000 Business and Professional houses in the Dominion, and as all the best of these are subscribing or advertising, you can readily see the enormous circulation we will have at the price we are selling this work. We would like to have your subscription for the above. **Price \$1.50** in Canada, \$2.50 abroad, on delivery of book.

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HART CORUNDUM WHEEL CO.

LIMITED

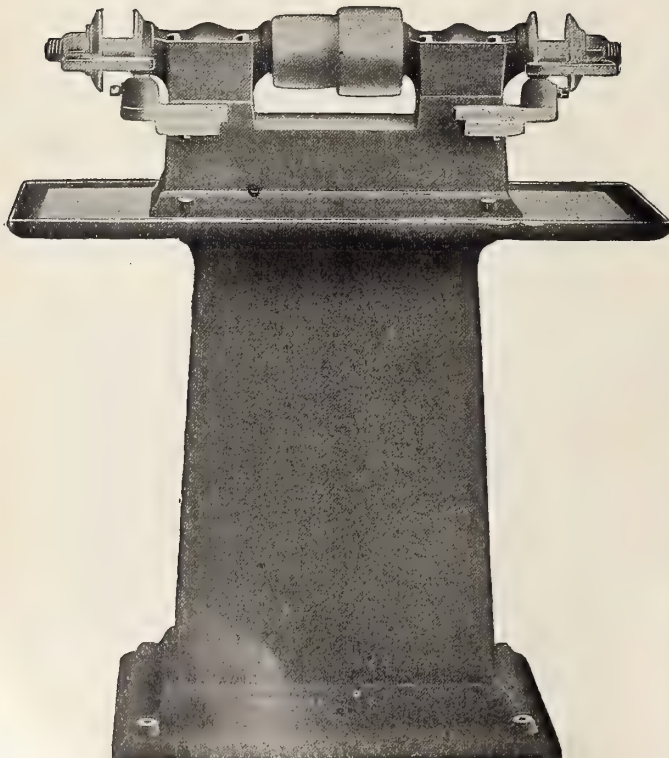
HAMILTON = CANADA



The Old Reliable

There are still some manufacturers who foolishly persist in using Emery Wheels. Emery is a mechanical admixture of corundum and magnetite or hematite. It is the presence of the corundum in the emery that gives to it its abrasive qualities and makes it of commercial value, and the abrasive efficiency of emeries varies according to the percentage of corundum they contain.

We make a specialty of Craig Mine Crystal Corundum Wheels. Try them once, and you will never order another Emery Wheel.



Cyclone Grinder

No. 16

Built on Scientific Principles.

Can be used either on Bench or Pedestal, with or without Table.

Will carry two wheels, 12 x 3 inches.

Bearings Absolutely Dust Proof.

Fitted with Automatic Oilers.

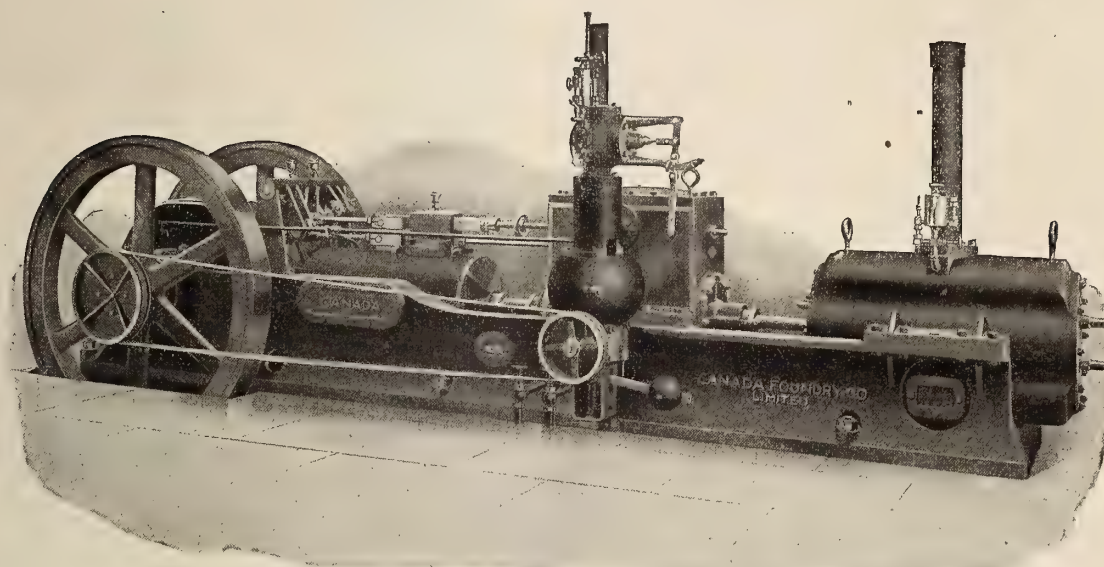
Countershaft has Cone Pulley, 12 and 13 x 3½ inches.

Tight and Loose Pulleys, 6 in. diam., 4 in. face, and should run 750 Revolutions per minute.

Ready for Immediate Delivery

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CANADA AIR COMPRESSORS



Steam, Belt or Power Drive.
Self-Contained.
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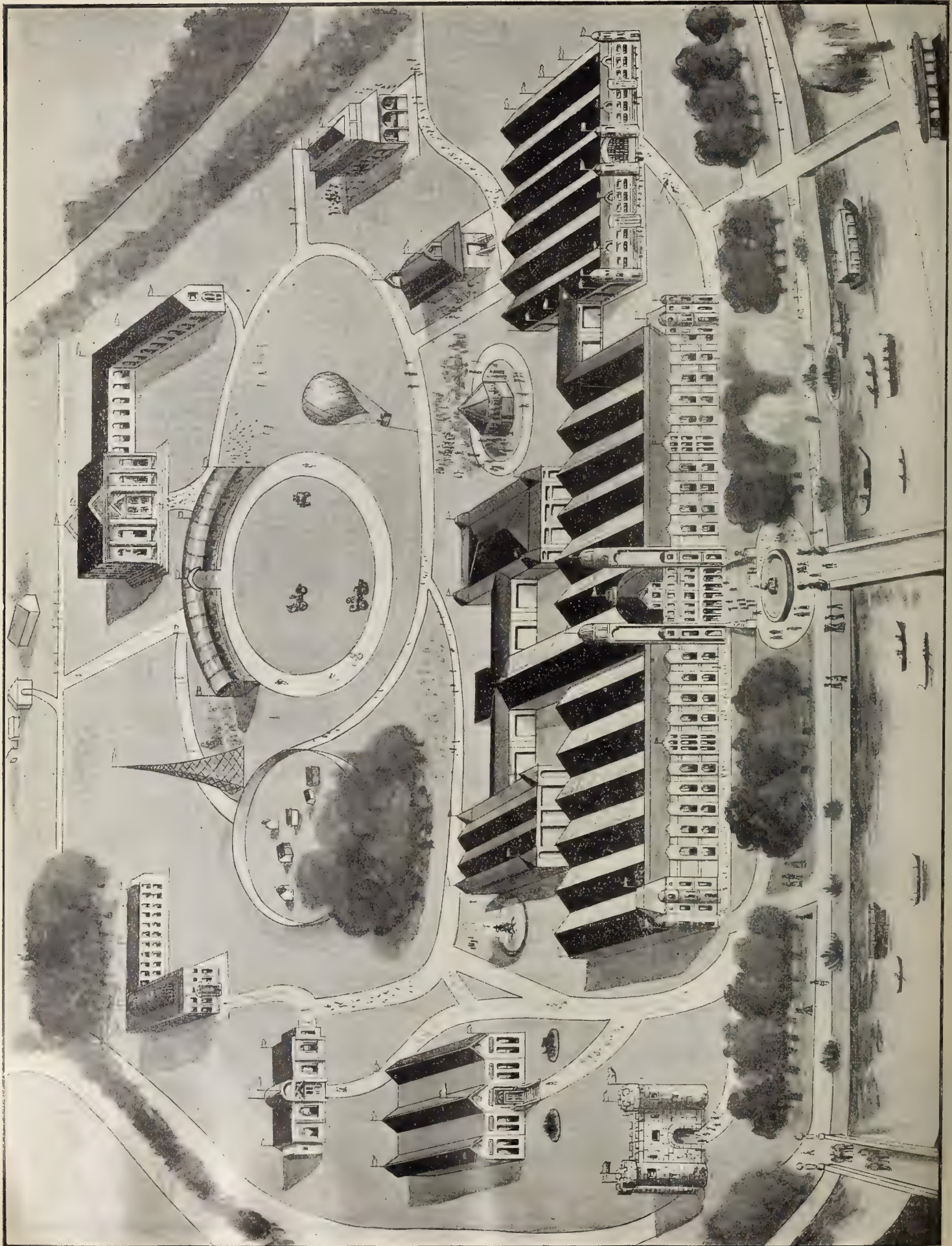
Straight Line or Duplex Type.
Any Pressure.
Any Capacity.

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BIRD'S EYE VIEW OF THE NEW ZEALAND INTERNATIONAL EXHIBITION

**Nov. 1st
1906**

NEW ZEALAND INTERNATIONAL EXHIBITION

**Apr. 30th
1907**

DURING the Summer of 1906-7 the Government of New Zealand will hold an International Exhibition at Christchurch, N.Z., in which all the nations of the world have been invited to participate (see opposite page for Bird's Eye View).

This country offers exceptional advantages as an

OUTLET FOR MANUFACTURED GOODS

of all kinds, and no better opportunity could be had of introducing your wares than at this Exhibition, where they will be seen by 2,000,000 people from Australasia.

Canada's exports to New Zealand in 1904 amounted to \$592,827. New Zealand's total oversea purchases for the same year were over \$66,000,000 (at least three-fourths of them manufactured goods). The margin for expansion is therefore enormous.

The New Zealand Preference

and

The Direct Steamship Service via Vancouver

give Canadian manufacturers a tremendous advantage in meeting foreign competition in that market. Those early on the ground are certain to reap big rewards, for the country has only begun to develop. A creditable exhibit at Christchurch will be your best introduction.

Applications for Space Close March 31st.

Exhibition Opens November 1st.

Further particulars on application to the Secretary, C.M.A., Toronto.

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For all High-Pressure Blast Service.



BUFFALO CUPOLA BLOWER

B. VOLUME BLOWERS FOR LARGE QUANTITIES OF AIR AT MODERATE PRESSURE.

"The running record of a blower embraces its effectiveness, its consumption of power, its maintenance cost, and its period of usefulness, and should be the determining factor in its choice."

A lively appreciation of these requirements has made BUFFALO BLOWERS unequalled for the

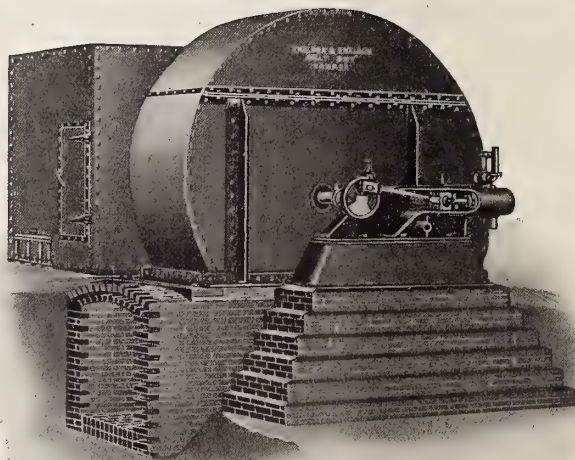
**Economic Handling of Air
Under any Conditions.**

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Hot Blast
Heating Systems
for
Schools, Colleges,
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Shops, Car Sheds &
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Mechanical Draft
Systems
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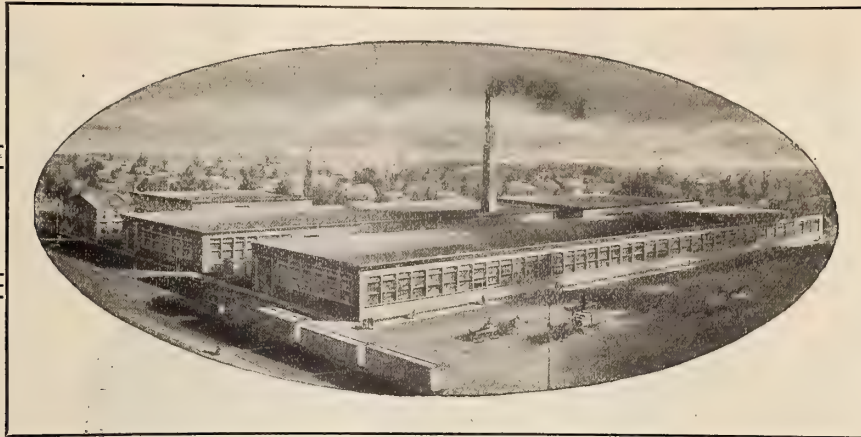
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of all kinds and for all
materials.

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Do you want to make your present Buildings more Fire Proof and lessen Insurance Costs? Do you want to make your Buildings warmer in construction and save in cost of heating, and add to comfort of employees? Do you want to extend your Buildings quickly at any time to increase capacity? Do you want to put up some Outbuildings at small cost, and which will not be fire traps? Do you want to cure your leaking roofs? Do you want to erect a New Plant at small cost, and have the bulk of your capital to run the business? If your answer is "YES" to any of these questions, write for our Catalogue and give us particulars of your requirements, and we can be of service to you.

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Paris Plow Co.	Paris	Clare Bros. & Co.	Preston
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Cramp Steel Co.	Collingwood	Goldie & McCulloch	Galt
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Lang Tanning Co.	Berlin	McGregor, Gourlay & Co.	Galt
Breithaupt Leather Co.	Berlin	Perrin Plow Co.	Smith's Falls
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PRESTON **ONTARIO**

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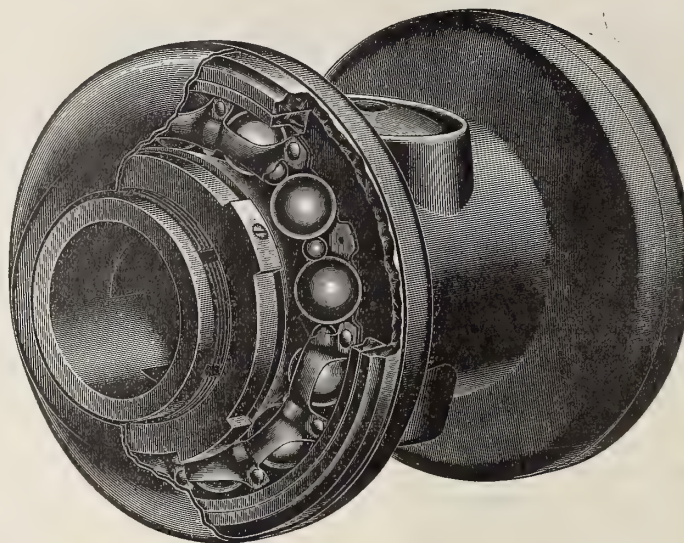
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A Bearing having the
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"We are of the opinion, in our case, that we save at least twenty per cent. in power with the Chapman Double Ball Bearing, and we also find a great saving in oil. The bearings are also clean; we have no oil running down hangers, posts, etc.

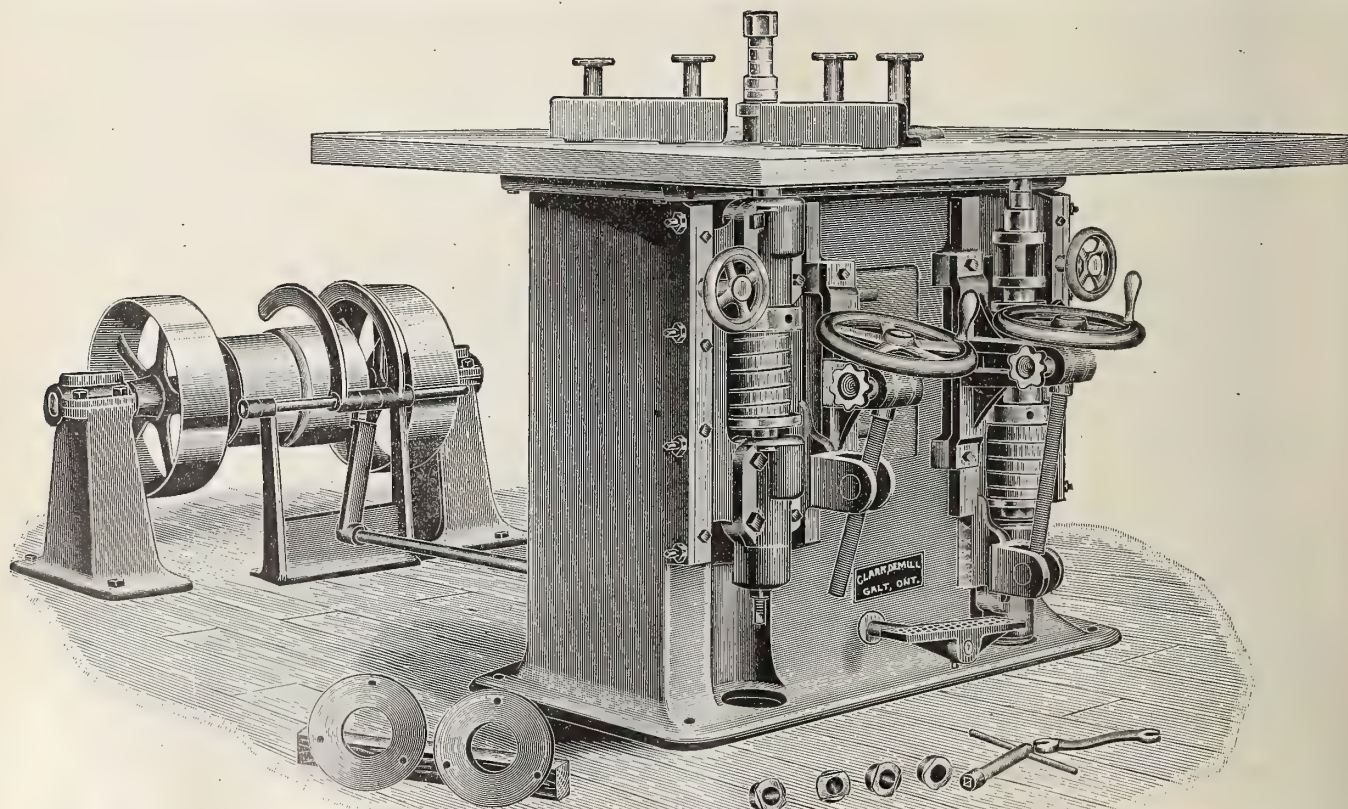
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We Guarantee You
a Saving
of 75 per cent.
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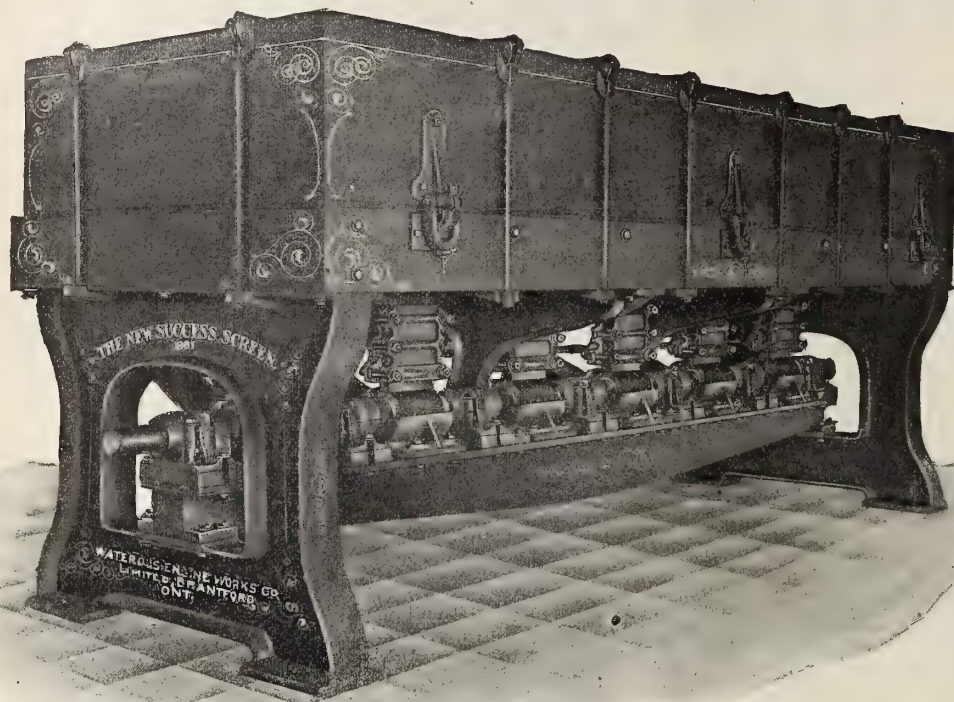
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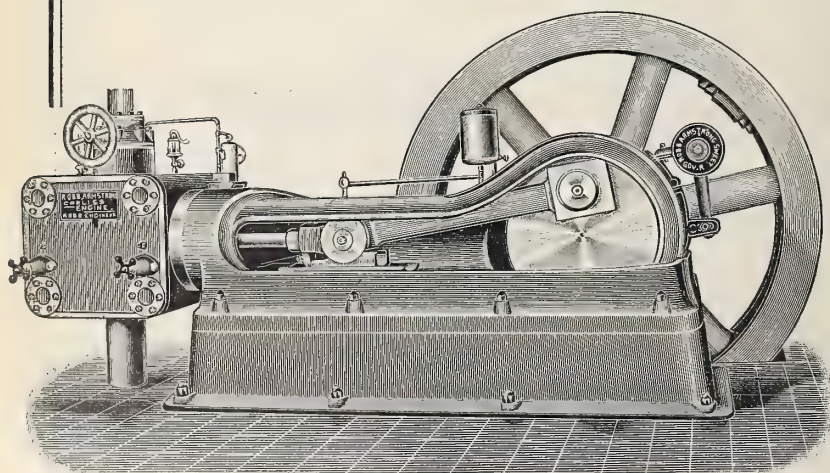
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A Fine Steam Plant



"I will say without qualification that it is as fine a boiler and engine plant as I have ever had the pleasure of seeing for its size. The engine was working without heating and absolutely without any noise. I wish to congratulate you on your success in building this class of engine, and hope that we may have pleasure in dealing with you again."

The above refers to a 350 horse power Robb-Armstrong Corliss engine and two 175 horse power Robb-Mumford boilers installed by us.

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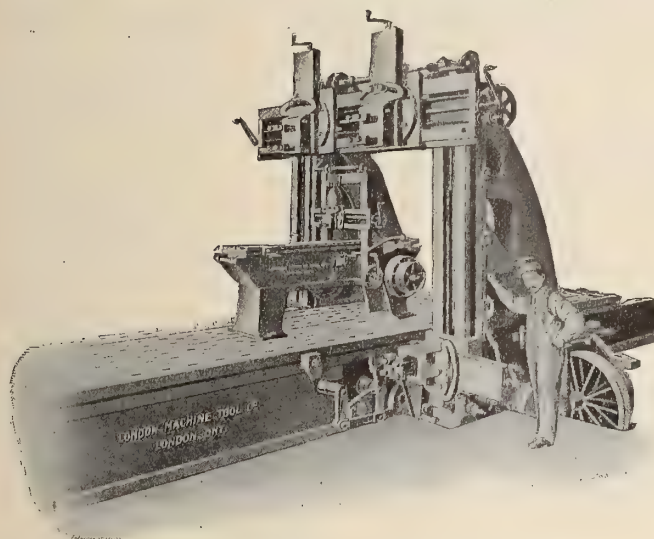
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THE STEEL RAIL MILL OF

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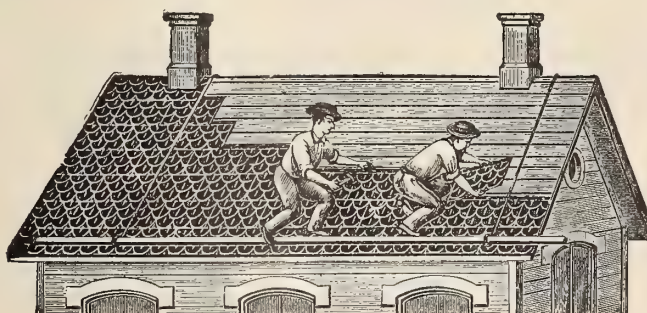
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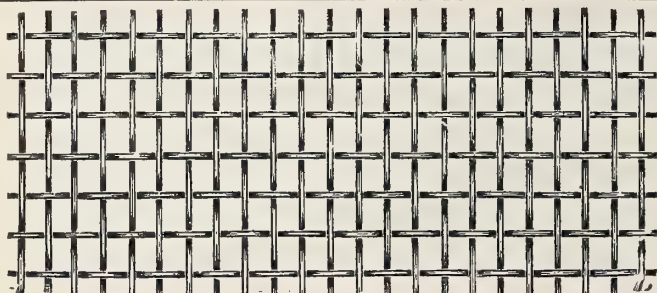
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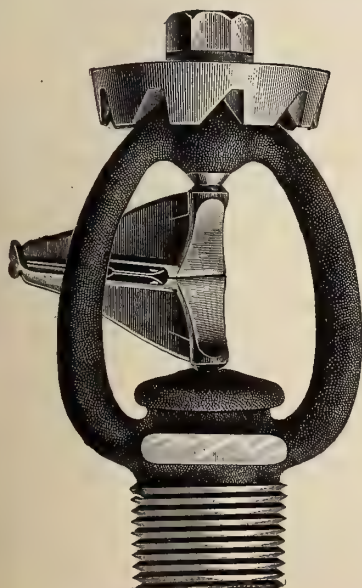
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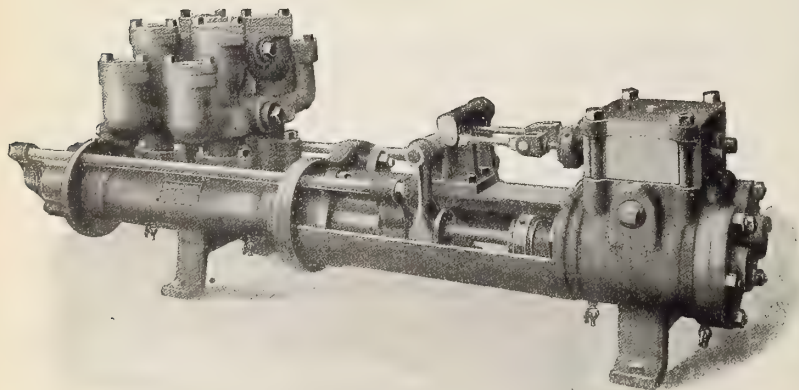
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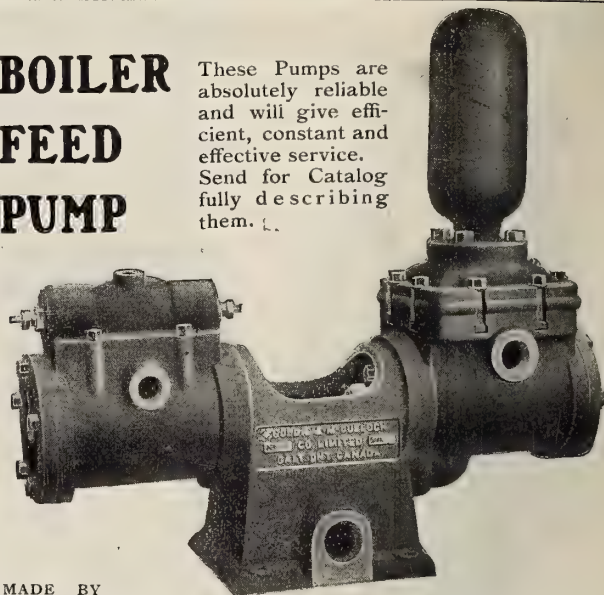
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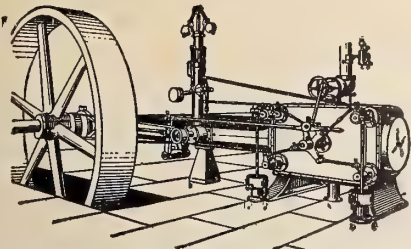
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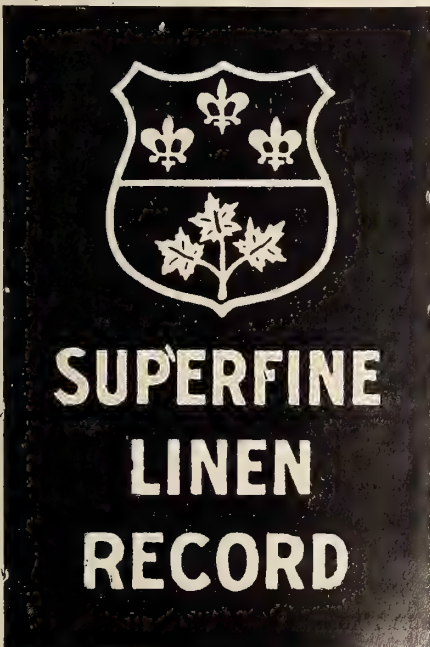
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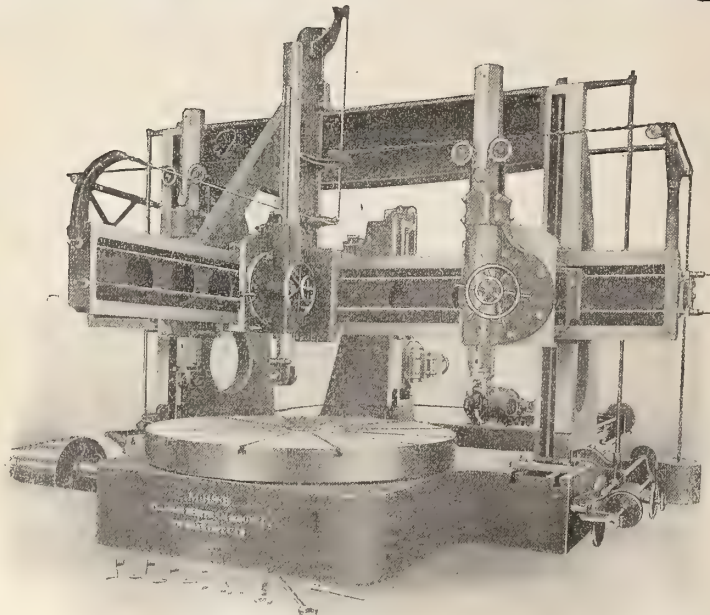
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EXECUTIVE COUNCIL

JANUARY MEETING

Resignation of the Secretary—Banquets to be held at London and Sherbrooke—Dissatisfaction Expressed with Ontario Assessment Act—Need for Uniform Insolvency Legislation—Resolutions Adopted for Submission to the Congress of Chambers of Commerce—38 New Members.

The regular monthly meeting of the Executive Council of the Canadian Manufacturers' Association was held in the Board Room, Board of Trade, on Thursday, January 18th, at 2.15 p.m.

There were present:—Messrs. C. C. Ballantyne, (President, Montreal; Geo. E. Amyot, Quebec; Geo. Anderson, Toronto; John Bertram, Dundas; Geo. Booth, Toronto; P. H. Burton, Toronto; J. C. Casavant, St. Hyacinthe; H. Cockshutt, Brantford; John W. Cowan, Toronto; L. V. Dusseau, Toronto; J. F. Ellis, Toronto; Thos. Findley, Toronto; H. W. Fleury, Aurora; Ed. J. Freyseng, Toronto; W. M. Gartschore, London; W. K. George, Toronto; W. P. Gundy, Toronto; Lloyd Harris, Brantford; S. R. Hart, Toronto; R. Hobson, Hamilton; J. S. McKinnon, Toronto; R. McLaughlin, Oshawa; J. B. Maclean, Toronto; W. C. Phillips, Toronto; J. A. Publow, Hamilton; John Ransford, Clinton; Thos. Roden, Toronto; J. T. Sheridan, Toronto; Jas. M. Sinclair, Toronto; F. J. Smale, Toronto; T. A. Staunton, Toronto; H. Stroud, Paris; J. M. Taylor, Guelph; J. O. Thorn, Toronto; R. L. Torrance, Guelph; John Turnbull, Toronto; Geo. W. Watts, Toronto; S. M. Wickett, Toronto; Daniel Wilson, Collingwood.

The minutes of the December meeting were taken as read.

Communications.

Communications were received as follows:—

(1) From the following members of the Council unable to be present:—Messrs. C. H. Waterous, Brantford; J. J. McGill, Montreal; Wm. Smail, Montreal; T. A. Russell, Toronto; E. G. Henderson, Windsor; Geo. Gillies, Toronto; Paul J. Myler, Hamilton.

(2) From Col. J. H. Burland, Chairman of the Montreal Branch, sending from Europe good wishes for a successful year to the President of the Association.

(3) From the Nova Scotia Branch of the Association asking the Executive Council to support a resolution having reference to a bounty on steel shipbuilding. The resolution was referred to the Parliamentary Committee.

(4) From Mr. R. J. Younge, tendering his resignation as Secretary of the Association. The President stated that he read the Secretary's resignation with great regret. He felt that the Association was losing a valuable officer, but that they should not stand in the way of his advancement. The Council formally accepted the resignation with expressions of regret. Mr. Younge's duties with the Association close on March 1st, when he leaves to take the position of sales manager for the Canadian Rubber Company of Montreal.

The various officers and committees then presented their reports, all of which were regularly adopted.

Secretary's Report.

The Secretary reported that during the month he had visited the Eastern Branches of the Association, and had

held successful meetings in the cities of Quebec, Amherst, Halifax and St. John.

Before the next order of business was called, Mr. J. P. Murray suggested that the Association should, in some fitting way, recognize the services that Mr. Younge had rendered to the Association during the four years which he was Secretary, and a motion was unanimously adopted to the effect that the Finance Committee should carry out the suggestion.

Treasurer's Report.

The Treasurer, Mr. Geo. Booth, presented a statement of the finances of the Association for the six months ending December 31st, which was accepted with satisfaction.

Finance Committee.

The report of the Finance Committee was presented by Mr. J. F. Ellis. It recommended the payment of the monthly accounts of the Association, and the re-engagement of the Assistant Secretary and the Manager of the Insurance Department.

Reception and Membership Committee.

The report of the Reception and Membership Committee was presented by the Chairman, Mr. L. V. Dusseau. It recommended for acceptance thirty-eight applications for membership, which were approved of. The names of these new members are given in another column.

It reported that the President of the Association, and Mr. McGill, of Montreal, had visited Sherbrooke, and reported favorably towards holding a dinner in that city during the month of February. This was recommended by the Committee, as was also the holding of a dinner in London in the near future.

The Committee also reported that progress was being made regarding railway rates for the Annual Meeting in Winnipeg, to be followed by an excursion to the Pacific Coast.

Parliamentary Committee.

Report of the Parliamentary Committee was presented by the Chairman, Mr. G. W. Watts.

The important features of the report were:—

(1) That the Committee were looking into the question of a uniform Insolvency Act for Canada, and reported that the same would be considered further at the next meeting of the Committee. This statement was commented on by Mr. Geo. E. Amyot, Mr. R. McLaughlin, and others, and the hope was expressed that the efforts of the Committee would meet with success.

(2) That the Committee had appointed as representatives to the Canadian Forestry Association Convention held in Ottawa, January 10th, 11th, and 12th, Messrs. W. B. Tindall, Carl Riordon, E. B. Eddy, F. C. Campbell, John Waldie, Wm. Price, Alfred Dickie, and D. C. Cameron.

(3) In reply to a circular sent out having reference to the Ontario Assessment Act, the Committee reported that the consensus of opinion was that the general principle of the act substituting a business tax for a tax on personality

was approved of, but that in a number of details the Act was not satisfactory to manufacturers, and on these points representations would be made to the Provincial Government at an early date.

Railway and Transportation Committee.

Report of the Railway and Transportation Committee was presented by the Chairman, Mr. R. Hobson, and appears in another column.

Insurance Committee.

Report of the Insurance Committee was presented by the Chairman, Mr. P. H. Burton, and it also is published in another column.

Commercial Intelligence Committee.

The report of the Commercial Intelligence Committee was presented by the chairman, Mr. Thos. Roden, and dealt with different matters as follows:—

(1) The Committee had been advised by the Hon. Sydney Fisher, that he expected that negotiations being carried on with the Japanese Government would soon result in Canada receiving the favored nation treatment.

(2) A communication from the London Chamber of Commerce asking the co-operation of the Association in securing an attractive rate for a tour through Canada for British University students, and the Secretary was authorized to use the influence of the Association with the railway authorities to secure attractive rates.

(3) A letter was presented from the Minister of Industry and Commerce of the New Zealand Government, appointing the Secretary of the Association as Commissioner in Canada for the New Zealand International Exhibition. It was unanimously recommended that the Secretary should accept this position, as the Exhibition was considered to be of the greatest importance for Canadian manufacturers. The appointment carried with it an allowance for expenses.

(4) As instructed by the Executive Council at its December meeting, the Committee presented four resolutions to be forwarded to the Sixth Congress of the Chambers of Commerce of the Empire to be held in London, England, July next, for consideration, as follows:—

Imperial Preferential Trade.

WHEREAS, Resolutions adopted in recent years by important commercial bodies throughout the British Empire have declared their belief that mutual preferential trade measures between the component parts will effectually promote the unity and prosperity of the Empire, and,

WHEREAS, This belief is strengthened by the conditions existing in international trade competition, by the growth of the British Dominions as producing and consuming powers, and by their need for further development,

THEREFORE BE IT RESOLVED, That this Sixth Congress of Chambers of Commerce of the Empire urges upon His Majesty's Governments in the United Kingdom, and in all British Dominions, the advisability of arranging at an early date, to their mutual benefit and satisfaction, reciprocal trade measures with the other portions of the Empire.

Patents, Copyright and Insolvency.

THAT WHEREAS, It is desirable for the promotion of trade and the safety of commercial interests within the

British Empire, that the laws governing important features of commercial life should be harmonious and reciprocal,

THEREFORE BE IT RESOLVED, That this Sixth Congress of Chambers of Commerce of the Empire recommends that immediate steps be taken through a joint Conference of Government representatives to establish within the Empire uniform and equitable laws respecting Patents, Copyright and Insolvency.

Special Trade Representatives.

THAT WHEREAS, It is desirable in the interests of British commerce, and for the unity of the Empire, that many of the goods now imported by British Dominions from foreign countries should be purchased from British sources, and also that Great Britain should increase the amount of her purchases from the other portions of the Empire,

THEREFORE BE IT RESOLVED, That this Sixth Congress of Chambers of Commerce urges upon His Majesty's Governments in the United Kingdom and in all British Dominions, the necessity of appointing special trade representatives in every other important market within the Empire, to encourage the development of such reciprocal trade.

Weights and Measures, and Currency.

THAT WHEREAS, With the progress of industry and the development of trade throughout the world, the establishment of uniform systems of Weights and Measures, and Currency, becomes more and more desirable and necessary,

THEREFORE BE IT RESOLVED, That this Sixth Congress of Chambers of Commerce of the Empire recommends the appointment by the Imperial Government of a Royal Commission, who shall investigate, and if possible, recommend uniform systems of Weights and Measures, and Currency, to be adopted throughout the British Empire.

The report also commented with satisfaction on the appointment of a Canadian Government Commercial Agent to St. Johns, Newfoundland, and the establishment of parcel postage from Canada to Trinidad, both of which had been recommended by the Association.

Branches.

Owing to the extended agenda, the reports of the Montreal and Toronto Branches, which are published in another column of this paper, were taken as read. The report of the Quebec Branch, also appearing on another column, was presented by Mr. Geo. E. Amyot, Vice-President for Quebec.

Technical Education.

The special Committee on Technical Education reported that they had arranged an interview to present the views of the Association regarding Technical Education to the Commission at the present time investigating the re-organization of Toronto University, and further that steps were being taken to present the report as approved of at the Annual Meeting to the Dominion Government.

New Business.

Under the heading of new business it was decided that the Finance Committee should be asked to report on the appointment of a successor to the Secretary.

The Late Hon. Raymond Prefontaine.

The following resolution having reference to the death of the late Hon. Raymond Prefontaine, was unanimously carried by the Council:—

"Canadians everywhere have learned with profound regret of the sudden and untimely death of the Honorable Raymond Prefontaine, late Minister of Marine and Fisheries, while serving his country on a mission abroad. His passing away will, undoubtedly, be felt as a distinct loss to the Dominion of Canada."

"BE IT RESOLVED, THEREFORE, That the Executive Council of this Association place upon record its appreciation of his valued services to the Dominion, and its deep sorrow at his death,

"AND BE IT FURTHER RESOLVED, That a copy of this resolution be forwarded to Madame Prefontaine, and to the Prime Minister of Canada."

It was decided also that the Association should be represented at the State Funeral of the late Minister by the President, Vice-President, Quebec Vice-President, and the Vice-Chairman of the Montreal Branch.

The meeting then adjourned.

RAILWAY AND TRANSPORTATION COMMITTEE.

Following is a summary of the principal matters which have been dealt with during the past month:—

Railway Commission Sitzings.

The Board of Railway Commissioners held sittings at Toronto on the 11th December, and at Montreal on the 14th December, at which matters relating to the classification of freight, rules of the Canadian Freight Classification, and demurrage regulations were discussed. The manager of the Department appeared and addressed the Board on behalf of the Association.

At Toronto an application by the Petrie Mfg. Co., for reduction in rating of cream separators was supported by the Department on behalf of the interested members, and is now under advisement by the Board.

The compromise arrangements with Canadian Freight Association respecting rules of Canadian Freight Classification No. 12, were submitted to the Board at the Montreal hearing for approval.

Supplement to Classification.

A supplement to the Canadian Freight Classification has been drafted embodying the extension of the mixed carload arrangement. A draft amendment is also in type which includes the changes necessitated by the modification in the Owner's Risk conditions in the classification. These are now being carefully checked by the Department.

The application on behalf of the manufacturers of skiffs and row boats for change in classification from an estimated to an actual weight basis has been granted.

Export Rates.

It has been brought to the attention of the Department that the tariffs issued under the Export Rate Order of the

Board of Railway Commissioners contain increases in rates on carload lots of leather and eggs. It is clear that the intention of the Board of Railway Commissioners was not to effect any increases in the export rates. This matter has been reported to the Board with a view to arranging restoration of the former rates on these commodities.

Railway Traffic Forms.

Notice has been received from the Board of Railway Commissioners that the conference regarding railway traffic forms and contracts will be held in the very near future. The Department is prepared to attend this conference at which it is hoped some radical modifications will be made in the present railway contract forms.

Rates from Western Ontario to Eastern Points.

A number of complaints have been received from interested manufacturers of rates charged upon shipments east-bound. The rates are found to be greater than those in effect from contiguous, and even distant United States points, and also higher than the rates in the opposite direction from points in Canada. Tabulated statements showing the exact position of the matter are being prepared by the Department, and will be submitted to the Committee at its next meeting.

Demurrage.

A draft order of the Board of Railway Commissioners containing the new Canadian car service regulations has been received by the Department, and was the subject of discussion at a conference with the railways in Montreal last week. It is expected that the rates will be in operation by the first of March.

INSURANCE COMMITTEE.

At the Annual Convention held in Quebec it was decided on the recommendation of the Insurance Committee that the department should be constituted into a brokerage office for the placing of the business of our members, and they were given a free hand in making the necessary arrangements therefor.

The Committee has already laid before the Council the rules and regulations of the Canadian Fire Underwriters' Association in respect to the manner of registering thereunder for the purpose of securing the necessary facilities for placing business in the companies forming that body, and at the meeting of the Council on August 17th, 1905, it was decided that whilst a connection with such companies was advisable, if not actually necessary, this Association should not subscribe, or agree, to the rule that precluded the transacting of business with companies not members of the said Underwriters' Association.

At the October meeting of the Council it was decided to address a communication to the members of the Canadian Fire Underwriters' Association, reciting the aims and objects of the department and inviting a conference with a view to securing the right to place business with any or all of the members of that body untrammelled by the restriction referred to in the last paragraph.

Accordingly on October 31st a letter was addressed to the thirty-one companies forming the Underwriters' Association, and that the members of the Council may fully appreciate the whole situation the committee think it advisable that this letter should be incorporated in this report

and read, even although it occupies somewhat longer time than usually allotted to the report of this Committee:—

Toronto, Oct. 31st, 1905.

Our Association has observed with profound regret and alarm the growth in recent years of the fire waste of the country, for, whereas over \$14,000,000 of losses were paid by the companies reporting to the Dominion Government in 1904, in the year 1894 the figure was less than \$5,000,000. It is not necessary that consideration should be given at this time to the main causes to which this increase is to be attributed, although it will not be out of place to say that after deducting the amounts paid in the Toronto conflagration of April, 1904, the balance constitutes a drain upon the physical wealth of the country, which is greatly to be deplored, and which is so serious as to demand earnest inquiry and effort on the part of all Canadians who have at heart the country's welfare.

The Insurance Companies, being merely the distributing agents of the funds collected from the many for the benefit of the few who suffer, not unnaturally look for this distribution to be made not only without loss to themselves but with a fair profit for the capital employed in furnishing a guarantee for the faithful fulfillment of the obligations undertaken. In pursuance of this well understood principle, with the increase in the amount of losses paid there has been continuous increase in the rates of insurance charged. In common with all other subjects, the manufacturers have been called upon to pay materially increased premiums until in very many cases the insurance tax has become a heavy burden on the actual cost of the factory output.

It will not serve any good purpose at this time to enter upon discussions as to the justice of the serious advances in rates that have been imposed by the Canadian Fire Underwriters' Association, of which you are a member, upon the manufacturing risks in the territory under their jurisdiction. Suffice it to say that as a result of such increase, whether justified or not, and for the protection of its members' interests in all insurance matters, this Association has created an Insurance Department, the purposes and objects of which it is desirable that we should lay before you. These are:—

- (1) The supervision of the policies of insurance covering the plants of its members and rendering advice as to the adequacy of forms, policy wordings, the acceptability and standing of companies whose policies are issued to the members.
- (2) The protection of the interests of the members in the event of the happening of a fire.
- (3) The collection of reliable statistics showing the results in premiums and losses, by classes and periods, of the business of its members.
- (4) Suggesting improvements in construction, distribution or protection, with a view to obtaining reduced rates, and the lessening of the causes and results of fires.
- (5) Improvements in Municipal Water Supplies and Fire Fighting Appliances, proper building laws, and the enforcement of by-laws regulating the storage of inflammable substances.

Our Association has but a nominal membership fee, and that the benefit of the Insurance Department may be obtained for our members who use it without being a charge upon the general revenue, it is expected that the department will be self-sustaining. To this end it must create its own revenue, and three sources are open for this purpose:—

- (1) Fees for the supervision of policies and for adjustment of fire losses.

- (2) Participating in the benefit of any saving that may accrue by reason of reduced rates arising from improvements made at the suggestion of the Department's officers.
- (3) By receiving from the insurance companies the same remuneration on business placed with them as is given to their agents for a similar purpose and service.

The last item presupposes the utilization of the Insurance Department in the placing of business, and at the Annual Convention of the Association, held in Quebec last month, this policy was heartily endorsed and received general promise of support. It consequently becomes necessary that arrangements should be made for placing business, and in view of the rules and regulations of the Canadian Fire Underwriters' Association on the subject of agency appointments, it appears to be necessary that special arrangements should be entered into with the members of that body to enable us to satisfactorily take care of the business entrusted to the Department.

We have been favored with a copy of the rules and regulations with form of agreement to be entered into and we find this divides itself into the following distinct obligations:

- (a) Not to "underwrite a risk at a lower rate of premium than that provided for by the tariff authorized by the Board."
- (b) Not to divide commissions with others not authorized by your Board to receive the same.
- (c) Not to return to the insured any portion of the premium.
- (d) Not to "effect or accept any insurance or re-insurance with or from any fire insurance company licensed to do business in Canada, not a member of the Board, except at full tariff rates, and then only when all Board companies are full or not open for the insurance."
- (e) To conform strictly to all Board rules, regulations and rates.
- (f) To "answer any question that may be put by the Secretary with regard to the placing or renewing of risks."

These six sub-divisions may be practically expressed in two conditions:—

- 1st. No business relations with companies licensed to do business in Canada (except as provided in sub-section "d"), not members of the Canadian Fire Underwriters' Association.
- 2nd. Strict conformity to all Board rules, regulations and rates.

In dealing with the members of your Association, under any certificate that may be granted, it is to be supposed that such rules, regulations and rates as may be adopted to govern your transactions with one another must be subscribed to and adhered to, and we are not adverse to signing an agreement along these lines, but we are not prepared to pledge sole allegiance to the companies represented in your Association to the exclusion of all other companies not members thereof.

A number of our members have already expressed a preference for companies outside of the Canadian Fire Underwriters' Association, and doubtless there are many others yet to hear from who will take a similar view; it is manifest, therefore, that in carrying out the instructions of our members in respect to the placing of their business we cannot adequately represent them if our relations with the tariff companies involve a total prohibition of all opportunities for caring for the fire insurance of those who desire the protection of that class of companies known as non-tariff offices.

We believe it is generally understood that sections "b" and "d" above recited are more honored in the breach than in the observance, and apparently from the offers made to us from time to time we should not experience any serious difficulty in indirectly placing business through the members of your Association. We can see no good reason, however, why a national organization like our own, which exists to promote the industrial development and improve the commercial conditions in Canada, should be obliged to resort to any subterfuge in undertaking to carry out the functions of our Insurance Department. We prefer to put the case before you in the light of your requirements, and ask that you amend your rules to permit us to place insurance in Canada untrammelled by any such restrictions as now exist.

We understand your rules provide that the privileges accorded to agents can only be secured under nomination from one of your members, and the express purpose of this letter, which is sent to all members of the Canadian Fire Underwriters' Association, is to ask that you meet us in conference at some date and place to be hereafter determined, within the coming month, with a view to reaching some arrangement that will permit us to transact business freely with the members of that body. Will you please advise us whether you are willing to participate in this conference, and if not favor us with an expression of your views on the subject now brought before you.

In conclusion, we think it desirable to record that it is the intention of the Department to employ, out of the funds received from all sources, a staff of inspectors whose business it will be to inspect the risks of those members who wish to have us do so; from their own standpoint, suggest improvements in physical construction, protection, distribution, and care, all with a view of reducing the fire waste to which reference is made at the commencement of this letter. The importance of the co-operation we can offer you in this respect cannot be overstated, and we hope nothing will intervene to prevent the consummation of the plans we have in progress to this end.

Having already stated that we are prepared to agree to the rules your Association may adopt to govern transactions amongst yourselves, it is scarcely necessary we should add that it is not the intention of our Association to offer any rebate or pecuniary consideration influencing the rate of insurance to our members, but that our only intention is to use the funds of the department in an effort to benefit the business and the country in the manner herein referred to.

Awaiting your reply,

We are,

Yours truly,

P. H. BURTON, R. J. YOUNGE,
Chairman Insurance Committee. Secretary.

A voluminous correspondence has resulted, and the Advisory Committee has carefully considered each and every letter that has been received and answered.

A summary of the correspondence and the final action of the Committee are shown in a letter sent yesterday (Dec. 20, 1905) to the thirty-one companies, to whom ours of Oct. 31st was addressed, as follows:—

Toronto, Dec. 20th, 1905.

Referring to our letter of Oct. 31st last, wherein we asked for a conference with your company and others forming the Canadian Fire Underwriters' Association, we now wish to indicate to you a summary of the replies we have received.

Our letter of Oct. 31st was addressed to thirty-one companies, constituting, we believe, the membership of the Canadian Fire Underwriters' Association at that date, and of this number two failed to acknowledge its receipt.

With a singular unanimity twenty of the companies on or about Nov. 3rd acknowledged receipt and promised that the subject of the letter should have attention at a later date; the remaining nine companies, through five chief agents, discussed one or more features of our letter leading to subsequent correspondence and their conclusions are incorporated in the summary that follows.

After a lapse of a month, wherein the silence was, also with singular unanimity, unbroken, we wrote on the 4th inst. to the companies which had either promised due attention or had not made any previous acknowledgment requesting a final reply; we have since heard from eighteen of these, and the following is a summary of the replies of the twenty-seven companies which have responded to our letter:—

Fourteen companies declined to discuss what they term "The delegation of inspection work to irresponsible officials," or the payment of commission, but are disposed to participate in a conference for the purpose of considering improvements in our members' risks.

Four companies intimate that a conference for discussion on the lines laid down in our letter is impracticable and uncalled for.

Three companies are willing to participate in a conference without restricting the scope thereof, and suggest that advantage be taken of the opportunity for our Association to show how far we can assist them in securing relief from burdensome taxation and protection from the competition from unlicensed companies.

Six companies dispose of our letter without meeting in any way the suggestion for a conference.

Two companies have failed to acknowledge our first or second communications, and two which acknowledged the first have failed to reply to the second.

It is manifest that the companies as a whole have utterly failed to correctly appreciate the remarks in our letter regarding inspection. We do not think the construction many of them have placed thereon can possibly be read into the paragraph of our letter dealing with the subject. The divergence of opinion on this topic is almost beyond comprehension.

The replies received, as well as the course of the correspondence, as indicated herein, clearly reveal concerted action and a decision based on an "ex parte" consideration without permitting us to be heard on matters of great interest to the members of our Association. Such being the case we must regard the correspondence as closed and proceed with the work of our Department on such lines as we may deem best in the interest of our members.

Yours faithfully,

P. H. BURTON, J. F. M. STEWART,
Chairman Insurance Committee. Asst. Secretary.

The Committee is giving earnest thought to the future plans of the Department, and it is hoped to submit a report at an early meeting for the consideration of the council.

The committee submit for the approval of the council a memorial to the Federal Government amended in accordance with the decision of the last meeting in respect to the appointment of a royal commission to investigate the whole subject of fire insurance in Canada.

"WHEREAS the business of Fire Insurance has reached such wide and extensive proportions as to materially affect the trade and commerce of the country; and

"WHEREAS provincial supervision and laws have led to conflicting and varying conditions that have placed additional burdens upon the insurance companies, and the policyholders; and

"WHEREAS a more complete and extended Dominion supervision and regulation of fire insurance would seem to

be in the interests of the people of the country as a whole;

"THEREFORE the Canadian Manufacturers' Association, Incorporated, through its Executive Council, earnestly request the Dominion Government to appoint a commission, clothed with the fullest powers, to conduct a thorough inquiry and investigation into the subject with a view to recommending legislation that will ensure the largest measure of Federal control, and that will more effectually protect and safeguard the large and important interests involved."

It is recommended that a copy of this memorial be forwarded to all Boards of Trade, Chambers of Commerce and other kindred associations in Canada inviting their support and co-operation in securing the appointment of the Commission at the earliest possible date.

Respectfully submitted,

P. H. BURTON,
Chairman.

MONTREAL BRANCH.

The regular monthly meeting of the Montreal Executive Committee was held on January 11th, with the Vice-Chairman, Mr. D. Lorne McGibbon, presiding. There were also present:—Messrs. C. C. Ballantyne, J. S. N. Dougall, J. J. McGill, S. W. Ewing, Geo. Esplin, S. S. Boxer, Geo. W. Sadler, Robt. Gardner.

A list of Montreal members who would be likely to attend the meetings in Toronto was prepared, and it was decided to recommend that these be added to the Standing Committees of the Association.

The year's engagement of Mr. Cameron as Montreal Secretary having expired, it was unanimously decided to recommend that the Executive Council re-engage him for the ensuing year.

Six membership applications were recommended for acceptance.

At the end of December, the Montreal Secretary went to Quebec in connection with the presentation of the boot and shoe, and paint and varnish memorials to the Tariff Commission. He also went to St. Hyacinthe in connection with two other memorials which were presented to the Commission.

A delegation consisting of Messrs. C. C. Ballantyne, J. J. McGill, and the Montreal Secretary, visited Sherbrooke on January 12th, where a conference was held with the manufacturers in regard to the further extension of the Association's activities in the Eastern Townships. The meeting in question approved of the Association holding a Banquet in Sherbrooke in the month of February, and also the establishment of a Sherbrooke Branch.

QUEBEC BRANCH.

Mr. Geo. E. Amyot reported for the Quebec Branch as follows:—

The regular monthly meeting of the Quebec Branch was held on Wednesday, January 10th. The chief business before this meeting was the consideration of municipal reforms needed in Quebec City, in which your Branch officers were anxious that the manufacturers should use their influence in the coming Civic Elections.

The meeting was well attended, forty-seven representatives being present.

It was unanimously decided that a special committee should be appointed to organize a campaign in order to effect

improvements in the Water Works System, the re-organization of the City Fire Department, and the enforcement of the contract with the Quebec Railway, Light and Power Co.

It was also unanimously decided to urge the Municipal Council of the City of Quebec to appoint a special permanent committee to attract new industries to Quebec City.

Mr. Jos. Picard, who has acted as Secretary since the organization of the Quebec Branch three years ago, sent in his resignation. This was accepted with regret, and Mr. L. Robitaille recommended for appointment in his stead. The approval of this appointment is before the Executive Council.

TORONTO BRANCH.

The monthly meeting of the Executive Committee of the Toronto Branch was held on January 11th. There were present Messrs. W. B. Tindall, Chairman; John Firstbrook, Ed. Freyseng, S. R. Hart, J. S. McKinnon, Jas. P. Murray, Frank A. Rolph.

Different questions were dealt with as follows:—

The Property Commissioner of the City asked the Executive to appoint a committee to discuss the enforcement of the Smoke By-law. This request was complied with, and a conference with the Commissioner will be arranged at an early date.

The South African Memorial Association wrote requesting the Association to make a donation to the South African Memorial Fund, or to request the members to do so, and was replied to to the effect that it was not within the province of the Toronto Branch, and was referred to the Executive Council.

A financial statement for the second monthly dinner of the Toronto Branch was presented, and the Dinner Committee announced that the subject for discussion at the dinner to be held that evening would be "Perpetual Purchasers' Excursions."

An important motion of Controller Ward to increase the minimum wage of all civic employees, and employees on civic contracts to \$2 a day, was considered, and it was decided to convene another meeting of the committee as soon as certain necessary information was obtained.

NEW MEMBERS.

Passed by the Executive Council in January.

Berlin, Ont.

FORWELL FOUNDRY Co.—Soil Pipe and Fittings.

Bolton, Ont.

A. A. McFALL.—Flour.

Dresden, Ont.

O. & W. McVEAN.—Wheels, Hubs, Spokes, and Bent Goods.

Dundas, Ont.

THE DOMINION CANISTER CO., LIMITED.—Combination Canisters of Pulp Boards and Tin.

Guelph, Ont.

MORLOCH BROS.—Upholstered Goods, Springs and Mattresses.

Jonquiere, Que.

JONQUIERE PULP Co.—Pulp, Cardboard and Lumber.

Kincardine, Ont.

ANDREW MALCOLM FURNITURE CO.—Furniture. ✓

London, Ont.

THE COOK-FITZGERALD CO., LIMITED.—Men's Fine Shoes. ✓

KEENLEYSIDE & CO.—Lard Oil.

Merritton, Ont.

JAMES WILSON.—Wire Ropes and General Contractors' Plant.

Mieton, Queen's Co., N. S.

JOHN S. HUGHES.—Mechanical Ground Wood Pulp.

Montreal, Que.

CANADA LEATHER GOODS CO.—Leather Satchels, Bags, Belts, etc.

J. E. FOURNIER.—Trunks, Bags, Valises, Satchels, Dress Suit Cases.

JENKING-LESKIE BRASS MFG. CO.—Gas and Electric Fixtures.

THE WALTER M. LOWNEY CO.—Chocolates and Bon-bons. ✓

THE NORTHERN MILLS CO.—Pulp and Paper. ✓

A. SOMMER & CO.—Ladies' Outer Garments.

Orillia, Ont.

BRUCE MURPHY.—Collar Buttons and other Specialties in Jewelry line.

Owen Sound, Ont.

KEENAN WOODENWARE MFG. CO., LIMITED.—Woodenware and Baskets.

Quebec, Que.

P. A. LAMONDE.—Builder.

TOURIGNY & MAROIS.—Boots and Shoes.

Sarnia, Ont.

EMPIRE SALT CO., LIMITED.—Fine Salt. ✓

Southampton, Ont.

THE S. M. KNECHTEL CHAIR CO., LIMITED.—Chairs and Rockers.

St. Catharines, Ont.

WOOD BROS.—Shoe Leathers, Lace Leathers, Harness, (not Harness Leather.)

St. John, N. B.

CAMPBELL BROS.—Axes, Edge Tools, Springs, Axles.

JOS. A. LIKELY.—Lumber.

MARITIME ART GLASS WORKS, LIMITED.—Art Glass, Mirrors, Memorial Windows, etc.

Stratford, Ont.

JAS. A. CLINE.—Upholstered Furniture.

Toronto, Ont.

ALUMINUM AND CROWN STOPPER CO.—Crown Corks, Aluminum Stoppers, and Machine for Applying Same to Bottles.

S. F. BOWSER & CO., INC., (W. R. Hause, 2nd Member.)

HUTCHINSON & PETERSON.—Extracts, Bottle Stoppers, Syphons, and Bottlers' Supplies.

IDEAL WOMEN'S WEAR, LIMITED.—Whitewear, Blouses, etc., and Dress Skirts.

THE PAPER GOODS CO., LIMITED.—Cigar Pockets and Paper Specialties.

S. VESSOT & CO.—The Champion Feed Mill.

Vancouver, B. C.

THE CANADIAN RUBBER CO. OF MONTREAL, LIMITED.—(R. E. Jamieson, 5th Member.) ✓

Winnipeg, Man.

THE CANADIAN RUBBER CO., OF MONTREAL, LIMITED.—(Chas. Holden, 4th Member.)

THE GURNEY FOUNDRY CO., LIMITED.—(James Drewe, 2nd Member.) ✓

ONTARIO WIND ENGINE & PUMP CO., LIMITED.—(J. M. Reid, 3rd Member.) ✓

THE LONG CREDIT EVIL IN FOREIGN MARKETS.

A peculiar instance of German aggressiveness has recently come to light in connection with the efforts made by this Association to secure representation in Bulgaria and Roumania. That field should offer exceptional opportunities to Canadian manufacturers in a number of different lines, especially agricultural implements, but unfortunately the market has been made rather unattractive by the unbusiness-like habits which German exporters have encouraged among buyers in that section.

First of all, to drive out foreign competition and secure a monopoly of the trade for themselves, the Germans circulated broadcast by means of newspapers in their pay, most damaging reports regarding the solvency of Roumanian merchants. For a time this had the desired effect, and induced most European houses to accept no orders except upon a cash basis. In the meantime the Germans themselves, acting under the advice of their consular agents, who were on the ground and were studying the conditions carefully, entered into arrangements with native buyers for long terms of credit. The result was a monopoly for German manufacturers. The deception, however, was soon discovered, and French, Italian and English houses soon had their travellers back, actively competing for business and offering the same terms as the Germans, involving credits of from four to nine months.

Agents and commission houses now state that it is impossible to do business in these countries on any other than a long credit basis. Such business offers very little profit to the seller, and only encourages dishonesty on the part of the buyer. Were it confined to these states alone, it might not be so serious, but apparently this suicidal policy of German export houses is beginning to manifest itself in other parts of the world as well. Our correspondence of late has contained several references to the evil, and it is to be presumed that in the majority of cases it is due to German influences.

THE AUSTRALASIAN LUMBER INDUSTRY.

The Canadian Commercial Agent at Melbourne contributes an extensive report on the above subject to the Department of Trade and Commerce. The annual value of the industry in the Commonwealth is placed at £2,251,000, and in New Zealand £972,000, these figures representing the value of the rough lumber as it leaves the mills. The total exports for 1904 amounted to £828,000, consisting principally of hardwoods, of which Canada and the United States took comparatively little.

Canada's sales of lumber to Australia show a fairly satisfactory increase, though from the total extent of her imports it is apparent that we might do a much larger business. Our principal shipments have been clear pine shelving and tongued and grooved boards, and undressed timber of a size less than 12 by 6, though lath, staves and pickets also run into fairly large amounts and are in considerable demand, particularly staves, which are used in making casks for the export of tallow.

For the benefit of British Columbia lumber exporters the following suggestions are made:—

1. They are not making an effort to secure at least a fair proportion of the Australian lumber business. It is absolutely essential that they should keep in touch with the leading Australian importers of Oregon pine, and the requirements of that country with the same energy and devotion as San Francisco lumber brokers.

2. The reputation of the grading and sawing of British Columbia lumber has to be re-established, making the

marketable condition at least equal to shipments made in Puget Sound.

3. A representative of the British Columbia lumber mills should visit Australia and ascertain the local conditions and why the trade is not larger. In every way he would accomplish much more than réams of correspondence could possibly do.

4. Melbourne lumber importers are strongly British in sentiment and would, all things being equal, prefer to obtain their supplies from British Columbia rather than from Puget Sound ports. Shippers should remember this and endeavor to increase their Australian business by constantly studying the trade.

"HONORS FOR AN AMERICAN WINDMILL."

Under the above caption the *American Exporter* (New York) in its issue of December 1st publishes an article which Canadians have read with mixed feelings of amusement and indignation. It is in reality an appreciative note about a Canadian manufactured product which has attained high honors abroad, yet with bare-faced immodesty this journal would calmly appropriate all credit to the United States. The opening paragraph of the article is as follows:

"It is always a source of satisfaction to hear of a tribute to an American product being made by some foreign nation. A very important testimonial was recently made to the windmill of the Gould, Shapley & Muir Company, Limited, of Brantford, Canada, and while this is not a product of the United States, it is so familiar in this country that we can almost take the credit to ourselves. The honor referred to was in the shape of an award from the Royal Agricultural Society of England after a severe test. The diagram which the Royal Agricultural Society published, giving the result

of the tests, shows that the mill referred to pumped 92 per cent. more water than the mill which was awarded the second prize, both mills being of the same size."

Following this comes a lengthy description of the mechanism of this "American" make of windmill, and a full statement of the points upon which the Agricultural Society based its award.

"What we have we hold, and what we haven't got we'll take," would perhaps be a suitable motto for the banner of those commercial pirates in the United States who seem determined by hook or crook to bring to their own door the credit for every good thing which is produced in America.

Not only are they willing to sit in the reflected glory which but too often falls about them by reason of the double interpretation of the name "American," but they actually seem disposed to manipulate the reflectors in such a way as to get all the glory for themselves and leave none for the smaller neighbor who actually earned it. Canadians can see much to admire in the aggressive commercialism of the United States, and are glad to follow their lead in some directions, but there are a few things in which we can give

A corporation under the name of Stanfields, Limited, has been organized for the purpose of acquiring the plant and entire undertaking, including patents, trade marks, and good-will, of the Truro Knitting Mills Co., Limited, and also establishing an extensive worsted yarn mill in Truro, to carry on the two industries together, one feeding the other and supplying the demand of the whole of the Dominion for worsted yarns. The company which is capitalized at \$750,000, will put up a large new factory of brick and stone, three stories high, and covering an entire block. When completed it is said that it will be the largest manufacturing plant in Nova Scotia outside of the Dominion Iron and Steel Co.

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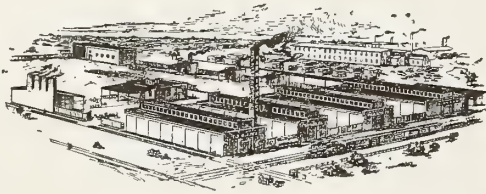
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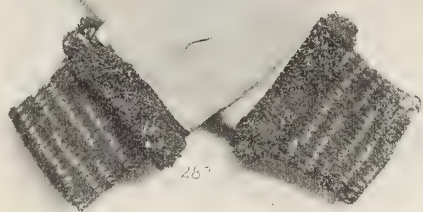
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No. 8.

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BRITISH COMMENT ON THE C. M. A. MEMORIAL.

IF the British public have in times past been indifferent to the views expressed by important bodies in other parts of the Empire on Imperial matters, that charge no longer holds true. As a striking example of this fact we have observed with satisfaction the keen interest taken by leading papers in Great Britain in the tariff pronouncement made by the Canadian Manufacturers' Association before the Dominion Government Tariff Commission last month. A number of the most representative newspapers published the memorial in full, and many interesting comments appeared, touching on the tariff phase of Canadian and Imperial development.

Speaking generally, the comments and criticisms which have come under our notice have been favorable to the views expressed by the Association. The policy of a "preference without a sacrifice" appeals to the Imperialist who desires the development of every British dominion, and the closer welding of them all into one Imperial whole.

One British correspondent writes that "the memorial of the Canadian Manufacturers' Association addressed to the Canadian Tariff Commission is one of the most important documents which has so far been issued since the fiscal controversy began."

The London "Times" in its editorial columns has the following significant sentences:—

"At this juncture, however, we are effectively reminded that the question is not simply a domestic one, for discussion in those islands. It is a question for the Empire, a question as vital to the Colonies as ourselves. Whatever we may be doing at the moment, they" (the Canadian manufacturers) "are carrying on the consideration of it. For a long time they have been investigating this problem, and, as a result, our correspondent is able to say to-day that, if no people have a clearer apprehension of the difficulties in the way of preference than the Canadian manufacturers, there are none who believe more firmly or with better reason in its possibility and its advantages. They regard it as an essential part of their policy of development, which is meant to promote Canada's resources all-round and to strengthen her as a member of the Empire. What they understand by it they have put as tersely as possible in this phrase from the memorial—'make everything we can at home and buy our surplus requirements as far as possible from British sources.'"

"Of the present position of the Colonies we know enough to be sure that it would be futile to preach free imports there. The Colonies themselves are well aware that it is not wise to go about unarmed in the economic world. As our correspondent points out this morning, they know that a powerful tariff-protected country like Germany or the United States could deal crushing blows at their nascent industries, and that, if they were to strip themselves of defences and have free importation, their ideal of national development could not live for a day. A tariff is for them the only solution, modified by preference, which will prevent Canada from being crushed economically and isolated politically by the unfettered play of economic forces. It is perfectly true that, in advocating preference, fiscal reformers in this country have laid more stress on the development of Canada's agricultural resources than on that of her industrial resources. But here they are only in agreement with the Canadian manufacturers themselves. The memorial of the Manufacturers' Association explicitly recognizes that agriculture is the first and most important of all Canadian industries, and urges that in any readjustment of the tariff the interests of the farmer should be protected equally with those of any other kind of producer. The Canadians have travelled far from the internecine competition of old-fashioned protectionists. They know that the interests of their various industries are not mutually hostile, but must be all alike promoted if Canada is to attain to her full growth. They realize how greatly we shall expand their home market by granting a

preference to their wheat-growers and thus stimulating their agricultural population; and in this expanded market we do not think that they will refuse us a share. . . .

"The encouraging thing is that Canadian manufacturers should have threshed out the question so thoroughly and be so evidently ready to meet us in a practical spirit; the pity of it is that we should have a Government which is not ready to meet them."

This editorial must, of course, be regarded as the utterance of a political newspaper, but it indicates an earnest desire to appreciate the circumstances surrounding Canadian development, and to accord due consideration to the voices that are calling across the seas for a united and uniting Imperial policy.

THE NEW DEMURRAGE RULES.

THE new demurrage or car service rules issued by the Board of Railway Commissioners are worthy of more than passing notice as an evidence of the Government's wisdom in constituting that body a clearing house for transportation difficulties. The somewhat arbitrary manner in which these charges have been levied in the past has given rise to a great deal of friction and unpleasantness between the railways and the shipping public, a condition which was only aggravated by the fact that the latter, who felt they were being unduly imposed upon, had no recourse but to "pay up" or suffer loss through confiscation. The shipper could, of course, after the release of his goods, make application for a refund, but such a process was invariably accompanied by long delays, and more frequently than not ended in a manner calculated to discourage any further claims of a similar nature.

The new rules, besides stipulating that an extension of time shall be made in the case of certain bulk cargoes, provide for an additional allowance of 24 hours when customs clearances have to be made. The shipper or consignee is relieved from all responsibility for delays arising from the action of customs officials, from inclement weather or from bunching, thus removing one of the most fruitful causes for complaint under the old regulations. The railways will henceforth be required to give due notice of arrival, a reasonable time being allowed for the transmission of such notices through the mail. This is a matter in which Winnipeg merchants will be particularly interested. The rule covering the commencement of free time after cars have been placed is also one which will be received with general satisfaction. In fact there is manifest all through the rules a recognition of the rights of the individual, and a desire to study his convenience without working undue hardship on the railways.

The Canadian Car Service Association to their credit be it said, have announced their intention of interpreting these rules in a liberal and broad-minded manner. The manager of their Bureau, Mr. J. E. Duval, late inspector for the Canadian Railway Commission, has expressed a desire to be promptly informed of any dissatisfaction with the administration of the present rules, or of any apparent injustice to which they may give rise, intimating that the railways will be glad to afford relief where it is possible to do so without discriminating. To facilitate the settlement of disputes it has been arranged that district inspectors shall be appointed, with power to dispose of all ordinary complaints without reference to head office. To these officials the complainant will always have access, thus ensuring for his case a prompt and careful consideration from first-hand evidence.

This announced willingness on the part of the railways to meet the public half way in the matter of demurrage charges is certainly a hopeful sign, and we echo the desire expressed by the Board that the public give the new regulations a fair and honest trial, without seeking to take undue advantage of the extensions of free time therein provided for.

It should also be stated, in justice to the Canadian Manufacturers' Association, that the new rules are almost wholly due to the indefatigable work of their Transportation Department. Without its intervention the demurrage problem would still be as far from a satisfactory solution as ever. That some relief has been afforded, not only to the members of that Association, but to the shipping public throughout Canada, is simply another evidence of the national character of their organization. In this connection it might be mentioned that as the rules are of a provisional character the Department is desirous of hearing from parties who encounter difficulties not covered by them, or who are called upon to pay charges for delays arising from circumstances beyond their control, in order that representations may be made to the Railway Commission for such alterations or extensions as may be deemed advisable.

THE DAY OF THE FARMER.

CANADA is and always will be a great agricultural country. Her mines may become exhausted, her great watersheds may be denuded of their forest growth, her fisheries are year by year being perpetuated with increasing difficulty, but her soil will be perennially productive. Farm property is undoubtedly her greatest and most permanent asset. It is the farm that builds her railway and steamship lines, her telegraph and telephone lines. Without the farmer Canada's trade and commerce would be as a house built upon sand. He is the very foundation stone of our social economy. His barns are the measure of the country's prosperity.

Little wonder, therefore, that the manufacturer, the jobber and the merchant are solicitous for his welfare! And little wonder that they view with deep satisfaction the present commercial outlook!

Never was the farmer so prosperous as he is to-day. Evidences of his thrift abound on every hand. The building of new fences, larger and better barns, more substantial and more comfortable homes, has come to be the merest commonplace. Every concession has its quota of prize-winning stock. The biggest factories we have in Canada are those which supply the farmer with labor-saving machinery. He has studied, he has gone to school, and has learned to secure the best results by the application of scientific principles to farming. His dress, the home comforts with which he has surrounded himself, his mild indulgence in the luxuries of life, and the education he is giving his sons and daughters, all attest his worth and his independence.

But figures are sometimes more eloquent than words. The last census tells the story of ten years' growth in farm products:—

	1891	1901
Grains	175,545,724 bush.	282,511,903 bush.
Roots	103,170,493 "	131,438,277 "
Hay.....	7,693,733 tons	9,104,058 tons

According to the same authority the total value of agricultural products in the census year was \$363,126,384, and represented a profit of 20.32 per cent. on the total investment! And, after feeding five and a half million Canadians the farmer still had \$78,630,966 worth of produce, or nearly 20 per cent. of his output, left for export!

Side by side with this enormous increase in production there is to be noticed a marked advance in the prices of farm produce. The following comparison relating to the Toronto market should be illuminating:—

Article	May 1897	May 1905	In- crease	Dec. 1897	Dec. 1905	In- crease
Beef .....lb.	.08	.10	25%	.05½ -.08	.07-.08	11½%
Butter .....lb.	.18	.28	55%	.17	.23	35%
Bacon ..... .lb.	.11	.14	27%	.13	.13	—
Eggs .....doz.	.09½	.16	68%	.18	.40	122%
Flour..... .bbl.	3.70	4.45	20%	5.00	5.50	10%
Potatoes .....bag	.60	.75	25%	.70	1.00	42%
Rolled Oats.....bbl.	2.80	4.60	64%	3.50	4.40	25%

But prosperity has not turned his head. He has been taking good care of his money. How good, was strikingly illustrated by Mr. R. J. Whyte of the Fröst & Wood Company, Limited, in a recent memorial to the Tariff Commission. Referring to the Government returns of chartered banks, Mr. Whyte said:—

"It will be observed that within the last ten or fifteen years the savings deposits of the country have increased in round figures \$300,000,000. There is no question but that the largest percentage of the amount at present on deposit in the banks (some \$600,000,000) is controlled by the agricultural community. Certainly manufacturers have contributed nothing to that amount, and the average resident of towns and cities does not contribute materially to the total. This large amount is in addition to the large sums on deposit with trust and loan companies, and in farm mortgages, and it is a well-known fact that in recent years the aggregate of farm mortgages, in Ontario particularly, has been decreased. The farmers to-day as a class are not borrowers but lenders.

Turning to the other side of the banking returns it will be observed that current loans and discounts, which represent the volume of money employed in the manifold industries of the country, have increased in just about the same ratio as the deposits. In other words, the manufacturers of the country and those engaged in other lines of activity are borrowing the capital required in their various businesses from the farmers, the banks representing the channels through which the funds are gathered together and distributed as required."

Truly this is the day of the Canadian farmer. News of his happy condition has gone abroad, and thousands upon thousands are rushing into the country to share in his good fortune. Everything points to a prolonged period of agricultural expansion. Larger quantities of manufactured goods than ever before will be required to supply the wants of this prosperous community. What of the Canadian manufacturer? Will he secure his just share of the business? It certainly behooves him to give this growing market his closest attention.

COMPETITION vs. RESTRICTION IN FIRE INSURANCE.

UNDER the above caption "Money and Risks" has an article in its January issue which possesses so much of interest that we reproduce it in full in this number. It will well repay the careful consideration of the thoughtful insurer, and aptly follows and emphasizes what we had to say

last month on the subject of a Royal Commission on Fire Insurance.

"Is it fair to assume that the average liability of the companies has had a bearing upon the loss ratio of the last ten or twelve years?"

In this question taken from the article referred to there is much room for thought. It is, we believe, an incontrovertible fact that in periods or years when the country has been free from conflagrations, the fire insurance companies have made substantial profits; in other words, under normal conditions, insurance rates have been high enough to yield more than a fair margin. The period between 1878 and 1891, and the individual years of 1903 and 1905 seem to prove this conclusively. If this is correct—and we do not believe there can be any two opinions on the point—then conflagrations have so upset normal conditions as to turn a margin in a good period or year into such an unfavorable record as to call for increased and ever increasing taxation upon the assured.

In the light of the comprehensive yet simply arranged figures quoted in the article we copy, there seems to be reasonable ground for the question predicated thereupon, and doubtless some answer may be forthcoming that will bring enlightenment to those who sit in darkness. We have ourselves recollection of some of our companies losing a full year's income in the Toronto fire of April 1904, and it is more than possible that it is conditions of this kind that have contributed to an undue and unreasonable loss to the companies, with consequent reflex action in increased rates. Whether this is so or not the question is a serious one and should receive attention. If it is so, may it not be that increased rates are not the only solution of the problem of how to make both ends meet!

Equally striking and suggestive is that part of the article that deals with the re-insurance problem. This is a new feature introduced into an old controversy, and if the companies are sending 25 per cent. of the business of the country to unlicensed offices abroad, as the article asserts, it is surely time to enquire why proper legislation should not be enacted to retain this business for the home market. The universal law of supply and demand would soon restore the equilibrium that might be temporarily disturbed by throwing open to competition so large a volume of business, and the ultimate gain would offset any slight disadvantage such a condition might give rise to.

A MINIMUM WAGE.

TORONTO Aldermen have decided to give that city an opportunity of seeing how the principle of a minimum wage operates when applied to civic works.

Owing to certain legal technicalities there is a possibility of their having to abandon the measure as something with which they are not competent to deal. It is plainly the Council's duty under the Municipal Act to let all civic contracts by free public competition, and the same principle applies to the employment of labor. It has already been decided by the Chancellor of Ontario, in the Crown Tailoring Co.'s case, that it is illegal for the city to impose a condition that corporation work should bear the Union Label. To fix a minimum wage would seem to be applying the same objectionable principle, and withdrawing corporation work from the field of open competition. Whether this analogy would be upheld by the courts is a matter of surmise, but in the light of recent decisions regarding combinations in restraint of trade it seems more than likely that the Council would have some difficulty in justifying their action.

Apart, however, from the legal aspect of the problem, the principle of an arbitrary minimum wage rests upon an

economic fallacy. Labor is a commodity which the working-man offers for sale. Like all other commodities, the price it brings is regulated by conditions of supply and demand. Fluctuations in its value are bound to occur. When a scarcity arises prices go up; when the market is flooded prices go down. It is useless to attempt to build artificial dams that will hold in check the downward flow of prices. If such a thing could be done it would mean the creation of fictitious values. The whole fabric of industry and commerce built up on such a basis would become top-heavy, and would be momentarily threatened with collapse. Industry, to be secure, must rest upon a foundation of solid values, and this can never be reached through such measures as the Toronto Council proposes to adopt.

The only way to give the minimum wage theory a fair trial would be to place it in universal operation, which is clearly impracticable. Toronto advocates of the proposal urge that it is going to be to the city's own advantage, but an analysis of the results which must follow show the contrary to be the case. It is useless for any one community to fix upon a rate of wage below which no labor shall be employed. If the market price in other communities be higher, the minimum immediately becomes inoperative; if lower, there is straightway an influx of outsiders in numbers too great to be absorbed. A throng of unemployed is the result, with all the attendant evils of destitution and crime. A community which always buys its labor in the highest market, when its neighbors are taking advantage of prices as they find them, will soon impoverish itself. Were the aldermen of Toronto to decide to buy all the Portland cement they required for civic improvements at a minimum price of \$2 per barrel, their policy would immediately be regarded as unbusinesslike and unjustifiable. Is it not equally unbusinesslike and equally unjustifiable for them to fix a minimum price at which they shall buy their labor?

In the true interests of the workingman himself it is very questionable if such a policy is to be desired. A minimum wage levels down; a competitive wage levels up. A minimum wage encourages slothfulness; a competitive wage encourages industry. A minimum wage stifles ambition by pulling the energetic workman down to the same class as his less competent fellow; a competitive wage stimulates ambition by the recognition of merit. A minimum wage restricts employment to the young and robust who are physically able to give value for that wage; a competitive wage enables the older and less hardy workman to share in the opportunities of earning a livelihood. A minimum wage by discounting ability makes a man a mere automaton; a competitive wage by discounting incompetence makes a man a real man.

Every one will, of course, appreciate the force of labor's plea in regard to the increased cost of living, and in view of the upward trend of prices it is but right that wages should be advanced from time to time. It is possibly true that in some lines wages have not increased as rapidly as they should have done, and we cannot but sympathize with the unfortunate workman who is not receiving a "decent living wage." We do not wish to be understood as in any way opposed to a further advance in wages; on the contrary, we believe that faithful and deserving men should receive more recognition than they do. But we do believe that labor is making a fatal mistake in endeavoring to establish an arbitrary minimum wage, which pays no heed to the merits of the individual case, but confers rewards upon the competent and incompetent alike.

CANADIAN PORTS FOR CANADIAN TRADE.

IN connection with the approaching tariff revision the Government will be asked to amend the regulations relating to the preferential treatment of British goods so as to make the preference applicable only to goods entering Canada direct from the country of their origin.

From a national standpoint it is highly desirable that this import trade should be diverted as far as possible into purely Canadian channels. Where cargoes break bulk or are trans-shipped, large towns and cities are generally the result. These centres of population might just as well be built up in Canada as in the United States. New York, Boston and Philadelphia are striking examples of cities which owe their start to the shipping interests which have converged at their doors. It is true that their growth has been accelerated by the tremendous development of the country beyond, which they were called upon to serve. But Canada, too, is on the eve of a tremendous development, which promises to be equally as great if not greater than that which the United States has experienced, and if Canadians will only stand firmly by the principle of "Canadian Ports for Canadian Trade," there is no reason why the ports of Halifax, St. John, Sydney, Quebec and Montreal, should not become second editions of New York and Boston.

Every dollar's worth of freight which Canada imports by way of New York is going to build up United States steamship lines and United States railways. It is enabling them to put on more boats, to build more cars, and to give more prompt and efficient service. It is strengthening the hands of Canada's greatest commercial rival, providing that rival with new weapons to be used in the struggle for export trade, and relatively weakening her own grasp on the trade she already possesses. Her commercial and industrial salvation depends upon her controlling the avenues through which her trade passes. If she cannot control the avenues now being employed, she should strain every nerve to divert that trade into channels which she can control.

The limitation of the preference to goods entering Canada direct from the country of their origin would be a big forward step in that direction. Of our total imports in 1904, \$102,214,623 came from countries other than the United States, and yet nearly 25 per cent. of that amount (\$25,162,379) reached us via United States ports. Of this latter amount \$16,370,811, or, roughly speaking, 65 per cent., was subject to the British preference. By the adoption of such a measure a large part of this traffic would be immediately available to build up Canadian ports, and other business not subject to preferential treatment would doubtless follow in its wake.

It is useless to attempt to disguise the fact that for the time being the Canadian buyer might be inconvenienced. The speedier service by New York is an important consideration with some of the large importing houses. The possibility of a shipping trust which for a time would absorb the preference in its ocean rates is not to be overlooked. The inadequacy of the present harbor facilities of our winter ports, and the inability of the railroads properly to care for the traffic already offering from those ports is another argument that is frequently urged against the adoption of such a proposal. But all of these disadvantages would soon cease to be, once the tide of trade began to flow in our direction. So long as we continue in our present policy of indifference there is no incentive for the steamship and railway companies to improve their facilities, but give them the traffic, and competition will ensure us reasonable rates and an efficient service.

IRRIGATION PROJECTS IN THE CANADIAN WEST

How the Canadian Pacific Railway Company will convert Three Million Acres of Ranching Country into Farms. Some Facts about the Biggest Irrigation Scheme ever attempted on the North American Continent.

Three million acres of land brought under irrigation! That is the project at present being worked out in the Canadian West. This means that water will be distributed over this area in such a way as to bring the productive capacity of the soil up to its maximum, no matter what the rainfall for the season may be.

Irrigation, to the great majority, brings visions of a tract of desert land, the home of lizards, snakes and cacti, and it must be admitted that in many cases where irrigation projects have been developed in the North American continent these conditions have prevailed. It must not be considered however that such is the case in every instance, for in many districts of the United States, and in the boundary district of Alberta, irrigation is being carried on at the present time in districts which in many seasons will produce an excellent crop, but which cannot be relied upon in all seasons.

Engineering science has progressed to such an extent that at the present time works are attempted which a decade ago would not have been considered feasible. As the western portion of this continent fills with settlers the value of the land increases to such an extent that it is not profitable to allow any tracts to lie idle which, with a reasonable expenditure of capital, can be brought under crop. Again, as the eastern farmer uses fertilizer to increase his crop, the westerner would like to have an assured supply of water available, which may be turned upon the land when needed. He does not need fertilizer, the ground is already rich enough, but the natural water supply is not always a definite quantity. Hence the need for irrigation.

The Awakening of the West.

When the main line of the Canadian Pacific Railway was first run through the country between Moose Jaw and the foothills of the Rockies, the engineers in charge of the work reported that the country traversed would be of little use, except for cattle ranges. For some years it appeared as if their judgment was to be sustained, for there was little along the route except the ranges and ranch houses of a few companies which had occupied selected portions of the territory. It may also be said that some of these companies had trouble in making both ends meet and were several times in financial difficulties.

Gradually there came an awakening. With the organization of an active immigration movement, and the advertising of the Canadian West and its resources to the world, settlers began to arrive in an ever broadening stream. In 1900 the tide had begun to flow. First the country east from Regina and south from Moose Jaw attracted the new arrivals, and later they turned north along the line leading to Prince Albert. It was not till 1902 that there was any pronounced movement further west, though the introduction of irrigation into Southern Alberta had been the means of starting several progressive colonies. Last season there was a strong movement northward from Calgary and points along the main line of the C. P. R. east began to feel the effects of the influx. It was the rapid rise in the values of these lands, and the practical demonstration of the value of irrigation, as shown in the country south of Lethbridge, Alta., which brought about the further development of the irrigation possibilities of the West.

There is every natural facility for irrigation in the country east from the foothills of the Rockies, and the contour

and general characteristics of the district lend themselves to an easy and economical development. The watershed which divides the water flowing east and south into the Gulf of Mexico from those which flow east and north into Hudson's Bay and the Arctic Ocean by way of the Mackenzie River, practically follows the boundary line between Southern Alberta and Montana. The eastern slope of the Rockies and the higher ground of the foothills furnish a storage reservoir in which the water from the melting snow of the winter season is held back much later than is the case in the prairie country. The general course of all of the rivers and streams is eastward, and flowing as they do through an alluvial country, having a rapid fall, there is a considerable current, which has cut a channel between high banks. The rivers are shallow, but on account of the current the volume of water is great.

Then again the character of the country would demonstrate to the most casual observer the feasibility of an irrigation project. It is irregular rolling prairie. Viewed broadly it resembles a collection of irregular shaped saucers, gradually sloping away toward the east. To get the water on this land all that is necessary is to carry a ditch to the highest available point on the rim of the saucer, and from there distribute it as needed. Here and there throughout the whole district are small creeks, many of which may be utilized as natural channels, while in some of the basins are small lakes which make excellent natural reservoirs. The whole of the land is covered with a dense growth of native grasses in many places from two to three feet in height, and both meadow and high-ground hay may be cut from every section. These grasses all cure on the stem and furnish the best of winter pasturage for stock of all varieties. It is the grass fed cattle of Alberta which supply the greater portion of the live stock shipped to the markets of Great Britain.

A Survey of the Field.

But to return to the irrigation project which is being carried out by the Canadian Pacific Railway Company for the translating of some three million acres of this range country into highly productive agricultural land. According to the original land grant of the C. P. R., the company was to have alternate sections from the lands along their route. When the irrigation project was first mooted it was evident that such an arrangement would not be suitable, so they obtained permission from the Dominion Government to select three million acres in a solid block. This they set about developing. These lands lie along their main line, between Calgary and Medicine Hat, and it is proposed to lead water over the whole tract.

In June, 1903, preliminary work was begun. A party of engineers were set to work mapping the district, and in the spring of 1904 the main canal and one of the distributing ditches had been located. During the same spring contracts were let for the excavation of the main canal, and the following spring work was begun on the first of the secondary canals. In laying out the work the whole tract was divided into three irrigation districts, these being again sub-divided according to the layout of the country nearing completion. It runs from a point near Calgary to Gleichen, on the C. P. R. main line, 55 miles east. From the Bow River it extends to the Rosebud on the north, comprising an area of something over 300,000 acres of irrigable land. The whole of the area is 999,455 acres, or about 30 townships.

In order to supply water for this area, the Bow River is tapped at a point on the east side of Calgary, and the water led, via the main canal, to Reservoir No. 1, 16 miles distant. Leaving the controlling gates at the intake, the canal follows the bank of the Bow for about half the distance. The fall in the river is much more rapid than is needed for the canal. The latter, therefore, follows the dirt cliffs, gradually rising above the river level, and winding in and out according to the contour of the country. As it flows east the canal is set in the side of the bank many feet above the level of the water of the river and gradually rising, finally reaches the open country. It was in this portion of the construction that the greatest difficulties were met.

Imagine a canal 84 feet in width at the surface of the water, which is 10 feet in depth, and carrying a flow of $2\frac{1}{2}$ feet per second, and one may get an idea of the extent of the work. On the bottom the canal is 44 feet wide and its banks have a slope of 3 to 1 for the greater portion of the distance. This gives a capacity of 2,000 second feet, water measure, or sufficient to irrigate the whole of the 300,000 acres of the

construction locomotives hauled trains of loaded cars to the dumping ground. There steam rollers packed the walls of the canal so that they would be able to withstand the rush of the current. Elevating graders and scrapers were used in other portions of the work where the cuts were not so heavy, and more especially on the distributing canals and ditches. The average number of men employed was some 500, and in addition to the machines operated by steam power there were 400 teams of horses.

From the figures of the engineer in charge, Mr. William Pearce, some idea of the extent of the work may be learned. On the main canal two and a half million cubic yards of earth were excavated, and on the secondary canal one and three quarter million cubic yards. The average cost was about 25 cents. per cubic yard. At various points along the main canal the banks have been strengthened with piling, more especially at the inlet, where a double row of sheet piling runs along the river face for some 300 feet. The inlet and controlling gates are of timber, heavy piles being driven to a solid foundation, and backed and faced with tongue-and-



Map Showing First Irrigation District now under Construction.

district. At one point where a jutting cliff would have necessitated a wide detour, the whole of the point was cut away, and the earth used to fill a depression a short distance off. This was the plan adopted throughout—cuts and fills, where such would shorten the distance to Reservoir No. 1, the objective point.

Some Suggestive Figures.

In order that the whole of the district may be properly served, it has been divided into three sections, each of which is supplied by a secondary canal. The first of these, secondary canal "A," is now complete, as is also the main canal, and in the Gleichen district the distributing canals have advanced so far that the company has placed these lands, 24,000 acres in all, on the market. The secondary canals, having lighter service are only 8 feet in width at the bottom, and carry 8 feet of water. Canal "A" is 65 miles in length, and the other two will be about equal. In all of the excavation work every labor-saving device possible was utilized. Steam shovels cut down the cliffs and dug the ditches, while small

groove piling. The sluice gates are controlled by a pawl and ratchet operated from the deck of the inlet.

About a mile below the inlet a spillway has been put in, by means of which the whole of the canal may be readily drained. In case of accident the controlling gates will be closed, and when the spillway is opened the water contained in the canal will be carried back to the river. When the bed is dry necessary repairs may be made. At this point a settling basin has also been made. There being a natural depression in the line followed by the canal, the hollow was not filled in. The retaining bank was carried by at a considerable height, with the result that at this point the depth and width of the canal are greatly increased. In consequence of this increase in the area of the cross section the flow of the water will be greatly lessened, so that if the water, as it comes from the river, carries a high percentage of earth or silt, this matter held in suspension by the current will have an opportunity of settling in the slower current of the settling basin. In many of the older irrigation plants the settling of this sediment in the distributing canals has resulted

in considerable expense, and even loss, due to the necessity of cutting off the water supply for a period while the canal was being cleared of the deposit. If it ever does happen that this settling basin becomes clogged, all that will be necessary to clear it will be to float a dredge into the canal, and the mud may be cleared without interrupting the flow of the water.

It will be seen that in the development of the irrigation scheme the company has prepared the most remote district first. The Gleichen tract is now on the market, but the others will not be put up for sale till this has filled to a certain extent. The surveys have been made for the distribution ditches through several of the other districts, but development work has been confined chiefly to the tract to the north and east of Gleichen. Secondary canals "B" and "C" have been projected and the preliminary surveys made, but no construction work done. It is expected, however, that contracts will be let on them during the coming summer. All of the lands in the first division are within easy reach of the railroads, nine miles being about the limit in those now ready, though to the south of Cheadale and Strathmore the distance is somewhat greater. Branch lines from the C.P.R. are provided for, however, which will serve these districts as the need arises.

The Largest in America.

A word to the project itself. For some years past a certain section of the magazines and press of the United States have devoted considerable space to the rapid progress which irrigation was making in that country, and the great areas being brought under water. It may be interesting to Canadians to know that the work now being carried on by the Canadian Pacific Railway Company is larger than any similar work which has ever been planned or carried out on the continent, either by private companies or by the Federal Government of the United States.

In the United States the largest irrigation scheme which has yet been proposed plans for the irrigation of 125,000 acres of land. The first section of the first district of the Canadian scheme will irrigate 110,000 acres of land and the total area of this district to be irrigated is one and a half million acres. The second and third districts bring the total up to three millions of acres. What this will mean to the Canadian West when the whole of the area is under crop, makes a problem to delight a statistician!

Official figures gathered by the United States Government prove that the farmer on irrigated lands raises larger crops per acre every year than does the farmer on un-irrigated and any year, so that the question comes down to

one of "is irrigation possible," instead of "is irrigation necessary."

Canada's Irrigation Laws.

One of the great points in favor of irrigation in Canada is the excellence of the laws governing water rights and irrigation development. It is claimed by competent authorities that as much money has been spent in some parts of the United States on litigation with regard to water titles as has been spent on irrigation development. With these examples before them those who framed the Canadian laws were able to escape many pitfalls. The laws as they stand have been declared by a resolution of the American Irrigation Congress to be far in advance of any similar laws in the United States, and a bulletin issued by the Department of Agriculture at Washington calls attention to the excellence of the Canadian laws, suggesting that their good features be adopted by States in which irrigation is practised.

Canadian irrigation laws are based upon the following broad principles:—

That all water is the property of the Crown, and can only be acquired for irrigation by making proper application to the government and obtaining authority to divert it, and that any person diverting it without first obtaining such authority shall be subject to a heavy penalty.

That no stream can be burdened with more records (permits) for water than there is water to supply, this being prevented by the refusal of the government to grant any further records after the debit side of the ledger account, opened by

them for each stream, shows that the credit of water supply, as indicated by yearly government gaugings, has been exhausted by records granted.

That the duty of water or the amount to be supplied for any given area (at the present one cubic foot per second for each 150 acres) and the irrigation season (May 1 to October 1) during which such water must be supplied, shall be fixed by the government, and not left to the whim of any irrigation company or person selling water for irrigation.

That all agreements for the supply of water for irrigation must be registered with the government, so that they may have notice of the contracts entered into by irrigation companies.

That any disputes regarding the division or distribution of water are settled by a Government official without the necessity of any appeal to the courts or bill to the parties making the complaints.

The parties complying with the provisions of the law and being granted right to divert water, obtain a patent



Steam Shovel Excavating on Main Canal.

direct from the Crown for the water, which they can carry in their pocket, if they wish, as *prima facie* evidence of their title, and that any attempt to interfere with such title is prevented by Government officials without cost to the owners of the water patent.

The best proof of the fairness and stability of the Canadian law relating to irrigation is the statement that although irrigation has been practised for ten years, and to-day in Southern Alberta there are 800 miles of canals and ditches, carrying water for irrigation, there has not, during that time, been one law suit about water rights.

Industry Revolutionized.

It has been stated previously in this article that the first irrigation district, with canal inlet at Calgary, covers an area of 300,000 acres which will be brought under water. This means that a supply of 2,000 cubic feet per second will be required as the maximum during the irrigation season. From gaugings of the Bow River at Calgary it has been learned that the minimum flow is 3,000 cubic feet per second, while during the season when this supply will be called upon the flow is seldom below 6,000 foot seconds. While this amount of water, three times what the records call for, is available, it is not supposed that the canal will ever be called upon for its maximum flow. This would only happen should a season come when the natural rainfall vanished entirely, which is highly improbable.

Farming is now a profitable industry in the district about Calgary, and in at least one season in three the farmer may depend upon the natural precipitation, while in no season is there an entire crop failure from drought. The small farmers are gradually forcing the rancher further back, their fences cutting off the huge natural ranges where the cattle and horses once roamed at large. The development of the irrigation has but hastened this end. It does not mean that cattle raising will become a dead issue in the West, but that it will be transferred to the hands of the farmer, who will keep a few cattle as one of the side lines of a mixed farming industry, and that cattle so raised will be more carefully fed and prepared for market, thus commanding a higher price.

Again there are other issues which will arise. At Raymond, Alta., a beet sugar industry has been founded, which last year was able to declare a neat dividend for its shareholders, and this though the industry is only some three years old. Last year the Canadian Pacific Irrigation Company tried a small plot of sugar beets at Gleichen. A shipment of the roots was made to Raymond for a test run, and though the conditions of the test were not entirely favorable,

the results demonstrated that the land there was eminently suited for sugar beet raising. This test was made without irrigating the land. Backed by such favorable results the company has expressed an intention of erecting a sugar factory at some central point in the district, within the next couple of years.

Last fall the company purchased the homestead of a farmer who has been on the land near Gleichen for several years. An adjoining irrigable section has been withdrawn from the market and these two will be used as demonstration farms. One will be farmed with the natural rainfall as its backing, and on the other artificial water supply will be used. In addition to acting as a comparison of the two methods of farming, these plots will be utilized for experimental work, the lessons learned therefrom being of great practical benefit to the other farmers of the vicinity.

What It Means to Calgary.

Harking back to the water supply, and some of the other utilitarian issues which will arise from the development of this tract. Calgary and other towns within the area of influence cannot help but be greatly benefited by the resulting increase in population. Because of the great distance from points of consumption and the resulting heavy freight tariffs, as many of the products as possible will be shipped in the manufactured state. Flour, hog products, meats, sugar, and other commodities will be prepared for market on the spot to save the freight on the heavier raw materials, and here Calgary is especially favored.



The Home of Fat Cattle—Showing Natural Grasses on Irrigated Land.

The Bow River rises in the Rocky Mountains, in the district about the Canadian National Park at Banff. It supplies the drainage for a number of small mountain lakes, and in finding its way from the foothills, passes at least two large falls, either of which may readily be developed for power purposes. At Bow River Falls and at Kananaskis Falls power development is now under consideration, and the coming summer will probably see active development work begun on at least one of them. At Kananaskis there is an initial development of from 8,000 to 10,000 electrical horse-power which may be made very cheaply, and with the expenditure of a greater amount of capital this may be readily raised to a maximum of 80,000 to 100,000 horse-power. This amount of power, wired to Calgary, would mean the development of a great manufacturing city in the West.

Chief among the lakes from which the water supply for this power would be drawn are Kananaskis, Devil's Head, Bow, Spray and Lake Louise. The situation of all of these in such that controlling dams may easily be constructed to

regulate the flow of water from them and so form reservoirs, which while they control the water supply would in no wise detract from the value of the lakes from a scenic point of view. Such a control would not only benefit the power proposition, but would also regulate the water supply for irrigation work. At Calgary, too, direct benefit would accrue to the city. At the present time when the flood waters come down in June of each year, it frequently happens that considerable damage is done along the water front by the high water. The city has been put to some expense in the construction of levees, but all of this would be done away with if the flood waters are held in the lakes to be let down as required.

The whole prospect is a most interesting one, and one that seems destined to become one of the important steps in the development of the Canadian West. That Canada is coming to its heritage cannot well be denied by any observing person who takes the trouble to look into what is being done there.

—L. H. STANTON.

ADVERTISING CANADIAN MANUFACTURES.

ARTICLE No. 2 Study of Advertising Methods.

THE very first step of the producer entering upon an advertising campaign is to formulate a plan, or at least a definite outline, of action. Foresight is better than hindsight every time!

This plan of action may be strictly adhered to, or it may be slightly deviated from, as circumstances govern in the course of time and events. But have a fairly definite policy any way. Do not jump in on a "hit or miss" way of doing things, of trying out every method that comes along, of tackling every medium in sight—a most excellent way to become separated from hard cash, but disastrous so far as business-building is concerned.

Necessarily the proper advertising of a product demands a great deal of thought at the outset. Expert advice at this stage is most valuable. The best advice comes from those who have been through similar experiences. Advertising men who have helped manufacturers are most likely to prove helpful, for with accumulated experiences to draw upon they can point out the stepping stones of success and the pitfalls of failure.

The points to study at the outset of an advertising campaign are:—

- Markets,
- Class of consumers,
- How to reach them, whether direct, through a mail order business, through the retailer or jobber,
- Advertising mediums,
- Advertising schemes and methods,
- How much to spend in advertising,
- The many details connected with the advertising proper.

There is enough to give any mind plenty to think about. Get expert advice at the beginning, even if it costs good, stiff fees. It is far better than wandering into an unknown field of expenditure with a bag of advertising money, and taking an excellent chance of returning without having accomplished much of anything except "blowing in coin." Any fool can spend money; it is the true business man who spends it with results.

An advertising plan of campaign can be prepared by an advertising specialist or advertising agency providing past performances show successful operations in similar lines. It is a pure business proposition—all advertising operations are—and the manufacturer should look upon it as such.

This plan of campaign is not necessarily adhered to—in fact very rarely is—for new ideas come up, new mediums come along and conditions constantly change. But it is well to have it in mind; it is a sort of guiding post, as it were, that shows the main road to travel.

About every manufacturer has his travelling salesman. Their work could be supplemented and much aided by good advertising. Each salesman could in the course of his reports to the home office tell about trade conditions in his territory, which information could be sent the advertising agency or department and there used to the best advantage.

Most manufactured goods reach the public through retailers. It pays manufacturers of such goods to help retailers in their advertising. Most goods bought by retailers are secured from big wholesale houses, who in turn should help the retailers in advertising.

To illustrate the ideas in the preceding paragraph it might be mentioned that the Lowndes Company, Limited, wholesale clothiers, Toronto (and other Canadian wholesale clothiers), maintain an advertising department, where advertising matter is prepared and freely given, with advertising cuts, ideas and schemes to boom business, to such retailers as handle the Lowndes make of clothing. Ely & Walker Dry Goods Co., one of the great wholesale houses in St. Louis, maintain an advertising department where advertisements are written, sales outlined, illustrations prepared, store papers produced, and every possible advertising help given the merchant to quickly sell the goods bought from Ely & Walker. The Canadian Rubber Company has a very live advertising department in its Montreal offices, where advertising matter is prepared that greatly helps the retailer in marketing rubbers, overshoes, etc. About all the big wholesale houses in St. Louis maintain advertising departments for the benefit of retailers who patronize them.

This is a first rate idea for the manufacturer or wholesaler who sells to the retail merchant to help him in every possible and practical way.

He can also assist him with liberal trade-paper, newspaper and magazine advertising. In my next article these mediums will be more fully gone into.

The producer who does not use the retailer in his marketing, but who sells direct to the consumer will also find advertising of decided benefit. In this case the advertising may consist of some trade paper publicity, a catalogue or booklet, and a series of follow-up letters. Such advertising may in itself alone consummate a sale; at any rate it paves the way and makes smoother the road of the personal representative.

Advertising in every case should be made to fit the business. To try to twist the business so as to fit the advertising is nonsense. The first duty of the advertiser should be to seriously analyze and study the business; its markets, its possibilities of expansion, its customers, its possible customers, its sales and such direct data as will be useful in preparing just the advertising that will fit the individual case.

The best kind of individual attention should be given the advertising. Only publicity that shows the touch of an earnest and intelligent personality is effective. Machine-made advertising is no good. If an advertising agency is called into requisition, see that a thoroughly capable person attends to the advertising wants of the client. Do not let a boy, callow young man or unsophisticated clerk pretend to do work which requires the highest qualities of salesmanship. Do not go to the advertising agency that is the cheapest; go rather to the agency that gives service, *good individual service*.

The next paper of this series will deal with advertising mediums.

J. ANGUS MACDONALD.

Tariff Memorial of the Canadian Manufacturers' Association

It is perhaps no exaggeration to say that since the beginning of the present tariff enquiry no single document has attracted more widespread attention or elicited more favorable criticism than the memorial presented by the Canadian Manufacturers' Association. Everywhere it has been recognized as one of the most successful attempts yet made to treat of this complicated problem in a broad and fair-minded manner. Even the opponents of increased protection are free to confess that it has compelled their admiration by its avoidance of abstract generalities, its strict adherence to facts, its eminent fairness and its convincing logic.

The memorial is addressed to "The Honorable, the Members of the Dominion Government Tariff Commission," and reads as follows:

In connection with the forthcoming revision of the Canadian Customs Tariff, we have the honor of submitting to you, in brief form, the views of the Canadian Manufacturers' Association. With a membership of nearly two thousand, representing as many factories scattered throughout every Province of the Dominion, and an invested capital of more than \$400,000,000, the Association is a national business organization. Our interests are so thoroughly bound up with the development of our own country that our welfare is dependent entirely upon the general welfare and prosperity of the whole Dominion.

General Conditions.

The conditions existing in Canadian manufacturing industries at the present time are, generally speaking, prosperous. True, a number of our industries are suffering from the unequal competition of foreign manufacturers, others are not making the headway that they should in new lines of manufacturing, and a number of others are depressed owing to competition with British firms under the preferential tariff; but generally speaking, the industries are thriving and expanding, and the Canadian people are showing a pride in the productions of their own factories and workpeople, which must be looked upon with gratification by the Government, and all others who are deeply interested in the development of the country.

Only within the last few years have the people of Canada awakened to the great possibilities which lie before them, and these have been years of general progress and prosperity. This fact itself aside from the changed conditions in many of our industries indicates that a thorough revision of our tariff at the present time is not only wise but necessary. As business men, we are looking to the future, and without pessimism we say, "Now while we are prosperous, now is the time to safeguard our country, as far as it is possible to do so against depression." (From 143524)

You have travelled across the continent to place yourselves in close touch with the interests of all classes in Canada. You are fully aware to what extent those interests are dependent upon the tariff policy of the nation—in these days when commerce is war, when industries are national rather than individual, and when the small beginnings of great enterprises in our own country must be defended against gigantic combinations of capital operating under foreign flags.

Importations.

We beg to call your special attention to the immense and increasing amount of Canada's importations. The

merchandise imported has grown from \$106,000,000 in 1895 to \$256,000,000 in 1905. Our exports of merchandise have grown in the same period from \$106,000,000 to \$201,000,000. It might reasonably be expected with the increased productions of our farms and the growing excellence of our manufactures that we should export more and import less proportionately than we have in the past. The figures are explained in part, however, by our proximity to the United States, whose manufacturers compete with us on unequal terms, and from whose great consuming markets we are practically shut out. Taking the Government returns for the past ten years, we find that, although we have only five and one-half millions of people, our imports from the United States reach the enormous total of \$1,138,997,000, while they with their great market of eighty millions of people have imported from us only \$660,000,000 worth; in other words, we have spent with them per capita in the last ten years \$207, while they have spent with us per capita only \$8. If we exclude unmanufactured gold and silver as well as coin and bullion from both exports and imports, making the comparison between the exports and imports of ordinary merchandise, the figures are still more unfavorable to Canada.

The manufactured goods which we now import from the United States represent the output of two cities as large as Toronto, fifteen cities as large as Ottawa, or another city as large as Victoria, Vancouver, Winnipeg, Hamilton, Guelph, Brantford, Galt, Berlin, St. Catharines, Peterborough, St. Thomas, Stratford, London, Kingston, Ottawa, Quebec, Sherbrooke, St. John and Halifax combined.

We wish always to be on friendly terms with the United States, but to the unfairness of these one-sided trade relations we object, not only on behalf of the manufacturers of Canada, but also on behalf of our farmers, our workingmen and every other class of producers. Every dollar that we send to the United States goes to build up our competitors, to pay foreign workmen and to buy the products of United States farms. Every dollar purchasing Canadian goods goes to build up Canadian factories, employing Canadian workmen, who consume the products of Canadian farms. We should, therefore, take steps at once to arrange our tariff so as to benefit our own people, rather than the people of the United States.

The Canadian workingman, if his products were no longer protected, would be obliged in most cases to abandon Canadian industry, and seek remunerative employment elsewhere. Business men throughout the whole country are looking to the Government for a policy which will invite the investment of capital, and offer good wages to the workingmen, their customers.

Unquestionably, public opinion in Canada to-day, irrespective of politics, demands a policy which will defend us from foreign competition, and at the same time encourage the growth and expansion of industries within our own borders.

The Farmers' Case.

We believe that the success of Canada lies in the co-operation of all her citizens—farmers, workingmen, manufacturers, miners, fishermen, and all others who are active in developing our resources. We recognize that agriculture is the first and most important of all our industries, and we desire that the most careful consideration shall be given to the great agricultural interests of the Dominion.

In the course of your investigations, you have heard arguments from a number of farmers advocating a reduction in the present tariff. On the other hand, the Chairman of the Commission has himself pointed out that some of the most urgent requests for increased protection have come from deputations of farmers.

We have no hesitation in saying that if the free trade farmers who have come before the Tariff Commission could have the same opportunities for studying the varied interests of the country that the Commissioners themselves have, if they could go through the factories of the Dominion, visit the mining towns and the lumber camps, and study the conditions upon which the prosperity of all these industries depend, if they could see the workmen pouring out of the factories, follow them to their homes, and to the business streets of the cities, towns and villages where they work, they would realize how the money paid out by the manufacturers for supplies of raw materials and in wages to their workmen circulates through the whole community. They would discover that when they buy goods made in Canada a great part of what they spend comes back to them again in payment for food. They would be amazed at the enormous quantities of food consumed in the cities, towns and villages of Canada. But even without going about in this way they can learn how large a proportion of what they produce is consumed in the home markets of Canada. Let them send for the census reports prepared by our able statistician, Mr. Archibald Blue, let them read the Trade and Navigation reports of the Dominion Government, and they will find that there was no exaggeration whatever in the statement recently made by a protectionist writer that in the census year nineteen hundred and one, the home market consumed eight times as much butter, seven times as many eggs, sixty-two times as many potatoes, over five times as much wheat, over eighteen times as much oats, and over nine times as much barley as we exported, and that in the same year nearly twenty-four times as many cattle, about two and a half times as many hogs, six times as many sheep, twenty-four times as many poultry, and 207 times as many horses were fed in Canada as were exported. They would find that he was right in stating that notwithstanding the great increase of grain production in the North-West in 1902 and 1903 as compared with the census year that Ontario, Manitoba, and the North-West Territories produced about two and a half times as much wheat, about twenty-five times as much oats, and about thirty-four times as much barley as the whole Dominion of Canada exported.

It has also been pointed out that the proportion of Canadian farm products consumed in the home market would have been still greater, but for the fact that our farmers, while almost completely shut out of the United States market by the high United States tariff, are exposed to keen American competition in our own markets as United States farm products are allowed to come into Canada on payment of comparatively low duties.

Evidently the home market for farm products is of immense value, and those farmers who came before the Commission to ask for higher protection were speaking more truly in the interest of the farming community as a whole than were those who asked for the abolition or reduction of duties on both farm products and manufactured goods.

Mr. Cobden, the great free trader, said many years ago to the farmers of England: "The farmer's interest is that of the whole community, and is not a partial interest, and you cannot touch him more sensitively than when you injure the manufacturers his customers." If that was true in England sixty years ago, it is no less true in Canada to-day. Cobden advocated free trade for England because he believed it would benefit the manufacturers, and he realized

that the farmers could not prosper unless the manufacturers were prosperous. Now, however advantageous free trade may have been to English manufacturers at that time when they were far in advance of all the rest of the world it is very certain that Canadian manufacturers cannot prosper at this stage of our development without protection, and if Cobden were living here in Canada to-day he would say to our farmers as he said to the farmers of England,—"The farmer's interest is that of the whole community, and is not a partial interest, and you cannot touch him more sensitively than when you injure the manufacturers, his customers."

Increased Prices for Farm Products.

In 1878, before the protective tariff was adopted, Canada had comparatively few industries, and the local demand for farm products was relatively small. The *Toronto Globe*, of April 11th, 1878, under the heading "Local Produce Trade," said:—"About nine cents may now be considered the top price for good fresh descriptions of eggs. Small lots from farmers' wagons probably bring one or two cents more. Choice butter is wanted for local use at prices ranging from 15c. to 17c., according to quality. The *Globe's* market report the same day of the same month in the year 1905, after numerous local industries had been built up by protection, gave the price of eggs as from 16 to 17 cents per dozen, and butter from 25 to 27 cents per pound. The *Globe's* market report for April 11th, 1878, gave the price of dressed hogs at \$5.25 to \$6 per cwt. For the same date in 1905, the prices ranged from \$8 to \$8.40 per cwt. Beef hind quarters sold at from \$4 to \$5 per cwt. on April 11th, 1878. On the same day in 1905 they brought from \$7.50 to \$8 per cwt. Potatoes, according to the *Toronto Globe* of April 11th, 1878, were unusually dear, owing to potato disease, but they sold at sixty cents per bag, whereas on the same day of 1905 the price was eighty-five cents per bag. Chickens were sold for 30 to 45 cents per pair in April, 1878, brought from 10 to 12 cents per pound live weight in April, 1905, or from 80 cents to \$1.20 per pair. Turkeys sold at from 70 cents to \$1.20 each in April, 1878, but the price was 14 cents per pound live weight in April, 1905, equal to \$1.44 to \$1.68 per turkey, if we calculate the weight at from 12 to 14 pounds. The increase in prices in most of the rural districts is far greater than would appear from the *Toronto* market reports because in 1878 there was generally considerable difference between the rural prices and the prices in *Toronto*, but many small manufacturing towns have sprung up where the prices are equal to and in some cases higher than those of *Toronto*.

Prices for Manufactured Goods Reduced.

While the prices of many farm products have gone up the farmer pays less for almost everything he buys. Take sugar for example. The price in 1878 was between nine and ten cents per pound retail, while at present it is between five and six cents per pound. In 1878 binders were sold retail in Ontario at from \$275 to \$300. In 1893 under a 35 per cent. tariff the retail prices was \$115 to \$125 according to terms of payment. The tariff is now 20 per cent., and the price is perhaps a little higher than under the 35 per cent. tariff, but very much lower than in 1878. In 1878 single reapers were retailed in Ontario at from \$100 to \$105; in 1893 at from \$60 to \$65, and in 1903 from \$65 to \$70. In 1878 Ontario farmers paid from \$65 to \$70 for mowers; in 1893 from \$47 to \$50; in 1903 from \$50 to \$55. Iron axle wagons sold for \$110, and top buggies for \$160, in 1878 and in 1897 iron axle wagons could be bought for \$85, and superior top buggies at from \$75 to \$80. The reduction in prices took

place gradually as the carriage industry developed under the fostering influence of protection. Numerous other examples might be given to show that while the farmer under a protective policy gets more for what he sells he pays less for what he buys.

The North-West Farmer.

There are not as yet in the Canadian North-West as many local industries as there are in the eastern provinces, and the North-Western farmers consequently do not receive such direct benefits from them, but the North-West farmer has the advantage of getting his land for nothing, or at a comparatively low price, and the Government is providing railways at the public expense in order to give the North-western farmers cheap transportation. In proportion to population the Government is spending far more money on railways in the North-West than on Eastern railways. But for the credit of the people of the Eastern Provinces, it would be impossible to build those railways. If the Eastern farmers had to share the burden of those railways without the benefit of the local markets which manufacturing industries create, they would be unable to endure it.

Industries are gradually being established in the North-West, and will be multiplied within a few years. Some sections of the North-West offer very great natural advantages for manufacturing. For instance, the town of Medicine Hat, in a memorial to the Tariff Commission which has been published by some of the newspapers, asks for higher protection in order to force American manufacturers to establish branches in the North-West, and offers to supply unlimited quantities of natural gas to manufacturers at the rate of five cents per thousand cubic feet. How many towns in Eastern Canada could offer equally cheap power?

A deputation of farmers which appeared before the Tariff Commission at Winnipeg to ask for a reduction in the tariff told the Commissioners that the farmers of Manitoba did not make more than fourteen dollars per year profit on the average. The Winnipeg newspapers which contained a report of this address of this farmers' deputation, also gave an account of an Englishman who arrived in Manitoba a few years ago with two shillings in his pocket, and is now worth thirty thousand dollars, all made in farming. Anyone who reads the Winnipeg newspapers regularly will know that there are many instances of farmers who have made fortunes in the North-West within a few years. We read of men paying for large farms with one year's crop. It is such instances of prosperity that attract settlers to the North-West. How many settlers a year would the North-Western Provinces get if the statement that the average farmer makes only fourteen dollars annually were believed. Fortunately for the country the statement was so manifestly inaccurate that it will have little effect in retarding immigration. If the people of Winnipeg had believed it the value of real estate in the Manitoba metropolis would have fallen off fifty per cent. or more. The farmers of the North-West do not all make fortunes. Some of them, no doubt, make very little, but this is true of many men in every line of business in all civilized countries, whether under protection or free trade. As a whole, however, the farmers of the North-West are prosperous, and there is reason to believe that the new railways which are soon to be constructed will make them still more prosperous. We wish it to be thoroughly understood that we offer no objection to the benefits now conferred on the Western farmer. We are heartily in sympathy with an aggressive Immigration and Railway policy for the West, and will give our hearty support towards any measures which will increase the prosperity of the Canadian farmer.

Protection for Our Farms.

In any readjustment of the tariff, the interests of the farmer should be protected equally with those of all other industries. The Canadian tariff on farm products is very much lower than the United States tariff, and consequently we import vast quantities of farm products from the United States that could be grown in Canada. The policy of the Government should be to increase the number of workmen in Canada who consume food and make the tariff on farm products high enough to secure for our farmers the full benefit of the home demand for food, thus making Canadian farmers less dependent upon distant markets overseas.

Protection Benefits Canada.

Aside from the absolute necessity of defending our interests against foreign competition, it is impossible in so short a statement to enumerate fully the benefits which flow to Canada from the encouragement given to her manufacturing industries. Blessed as we are with so many natural resources, we would be false to ourselves and to our country if we did not encourage their use and development. We can produce not only the necessities of life, but the basic materials for the world's greatest industries springing from the farm, the forest, the sea, the mine or the factory.

The encouragement already given to these industries has only given us a glimpse of what we are able to accomplish.

In the last twenty-five ^{years} cars, the progress made by the manufacturers of Canada has been remarkable; further encouragement will bring even more wonderful results. The industries already established have built up splendid Canadian cities, and are the mainstay of hundreds of towns and villages scattered all over Canada. They offer industrial opportunities not only to the people of these centres, but to the sons and daughters of our farmers—in fact, many of the brightest business men on this continent have sprung from the farms of Canada. Nothing but the establishment of diversified industries can keep our young men and women at home, and we view with regret the fact that a million and a half of our best blood and brains are to-day residents of the United States, attracted there by a development which we feel may be equalled, if not eclipsed in our own country.

The policy of encouraging the rise of industries within our own borders has at the same time reduced the prices of goods to our consumers, and has rendered Canada more independent of other countries for the supplies which our people need. In most lines of manufacturing in Canada, the cost of labor has increased during the past twenty years by about 50 per cent., and there has also been a substantial advance in the price of raw materials, as well as in the quality and finish of Canadian goods. Notwithstanding these facts, however, the prices of many lines of goods in ordinary use have been materially reduced. We might illustrate this fact by citing hundreds of examples from such classes of goods as clothing, knitted goods, kitchen utensils, house furnishings, farm implements, jewelry and silver plated ware, paper, saws, metal goods, boots and shoes, hats, paints, cement, carriages, and many others.

To the encouragement given to industries in Canada is also due the investment of outside capital in great manufacturing industries in our midst. Nearly every important city in the Dominion can furnish notable examples of large investments, chiefly from the United States in Canadian factories employing Canadian workmen, and manufacturing goods for the people of this Dominion. Within the past few years, more than one hundred leading United States firms have established branches in Canada. We hope that our

friends in Great Britain will not allow themselves to be outdone in this respect, and that they also will erect among us branch factories to supply the Canadian trade.

It may be said without fear of contradiction that this remarkable phase of our development is due to the tariff policy which has been so great a factor in our growth. Far from opposing the influx of capital and factories from other countries, we welcome the competition of business men from every part of the world, who establish plants in Canada, and manufacture under the same conditions as ourselves. Anything which the Canadian Government can do to encourage such investments will benefit every class in the Dominion.

The Anti-Dumping Regulations.

The present Government in their adoption of the anti-dumping regulations, have shown an earnest desire to protect Canadian manufacturers from unfair foreign competition. We still believe, as stated to the Government, that owing to the large number of our ports of entry, and the impossibility of securing accurate and uniform appraisal of the imports, that such regulations cannot be perfectly enforced. We believe, however, that the regulations have in many cases, resulted in great benefit to the manufacturers and workmen of Canada, and have had a far-reaching moral effect in preventing the slaughter of foreign productions on this market.

For these reasons, we hope that the regulations will be continued under the new tariff.

The Tariff Changes Desired.

You have heard the individual requests of many of the members of this Association in various parts of the Dominion. We desire now merely to indicate the general direction of the changes which we think necessary. (To express our views in a single sentence, we desire to make in Canada everything which can reasonably be manufactured here, and to buy our surplus requirements, so far as it is reasonable to do so, from British sources.) To this end, we desire a higher tariff than we now have against all foreign countries. While we do not favor any discrimination against the United States as compared with other foreign countries, yet the proximity of the great republic with its gigantic combinations of capital, its keen business men, and its constant surplus production, subject the manufacturers of Canada to competition which, unless properly safeguarded, means certain ruin. Moreover, it has become evident that United States manufacturers instead of resenting proposed increases in our tariff will establish branch factories in Canada as soon as the Canadian tariff is sufficiently high to warrant them in doing so. (We desire reasonable competition with the industries of Great Britain and the other portions of the Empire, that is, we desire a tariff against these countries which will equalize for the Canadian manufacturer the disadvantages under which he works in the higher cost of labor, capital, machinery, etc.—a tariff which will enable him to at least compete on equal terms in his home market with the manufacturers of Great Britain.) We favor the offer of a substantial preference to the other portions of the Empire, but we are strongly opposed to any policy which will prevent or limit the development of our own resources.

With regard to the proposed policy of a maximum, minimum and preferential tariff, we have only to say that, so long as it encourages Canadian enterprise to make everything we can at home, and to buy our surplus requirements as far as possible from British sources, we believe it to be in the best interests of the Canadian people. If, however,

such a policy should ultimately result in extending the minimum tariff to the United States, we are absolutely opposed to it.

Combines and Trade Associations.

A feeling of uneasiness has been aroused in Canada by proceedings recently instituted against certain "combines" and "trade associations." These organizations have not been confined to manufacturers, but we deem the subject of sufficient importance to be mentioned here. Discrimination must be made between "combines," and "trade associations." Combines which "unduly enhance" prices are an evil, and should not be tolerated in Canada. Trade associations, which bring business men together in an effort to meet legitimate requirements, exist in every branch of business life, and benefit the whole community by securing stability and protecting all classes from inordinate speculation. The influence of this Association is, and will be given to encourage only conditions which are honest and fair, and we sincerely believe that the business methods in Canada are, speaking generally, free from unfair combinations.

Conclusion.

In conclusion, we beg to express our unbounded confidence in Canada and in her people, our determination so far as lies in our power to advance her interests at home and abroad, and our earnest desire to have such readjustment of her tariff as will benefit every citizen in the Dominion, and form a milestone on the road to the consolidation of our great Empire.

COMPETITION v. RESTRICTION IN FIRE INSURANCE.

Should Re-insurance in Foreign Unlicensed Companies be Permitted to Continue?

(From "Money and Risks.")

Much has been written and many statements have been published of late showing how unprofitable the business of Fire Insurance in Canada has been in recent years; this conclusion is unquestionably true. While this is the case is it not equally the fact that most of the companies have put forth, and indeed are putting forth, the most diligent exhaustive effort to develop the business in every part of the Dominion? Herein lies one of the puzzling conditions inexplicable to ordinary mortals; on the one hand there is generally admitted unprofitable business, on the other hand the outstretched arms for more even in face of the record!

The greater the business, the greater the liability, yet how seldom do we find emphasis laid upon, or attention drawn to, this aspect of the question.

Our attention was recently drawn to a statement prepared to show the movement of fire insurance in regard to the amount of risks in force at different periods, and as the figures are somewhat interesting we think it well to reproduce it.

Year.	No. of Companies.	Amount of Risks.	Average per Company.
1880. Canadian Companies.	9	\$154,403,173	\$17,155,908
British	15	229,745,985	15,316,399
American	4	27,414,113	6,853,529
	28	411,563,271	14,698,688

1889. Canadian Companies.	7	\$158,883,612	\$22,697,654
British " "	21	468,379,580	22,303,799
American " "	6	57,275,186	9,545,860
	34	684,538,378	20,133,481
1899. Canadian Companies	9	169,792,859	18,865,873
British " "	21	654,890,000	31,185,240
American " "	8	112,186,809	14,023,351
	38	936,869,668	24,654,465
1904. Canadian Companies	10	295,888,876	29,688,887
British " "	19	745,159,661	39,218,929
American " "	8	872,965,394	21,620,674
	37	1,215,013,931	33,108,484

N.B.—These figures are taken from the Blue Book for 1904, page LXXXII.

In the twenty-five years covered by the foregoing statement, it will be seen that the number of companies and the amounts at risk have increased in the respective groups as follows:—

	No. of Cos.	Average liabilities per Co.	Percentage of increase.
Canadian Companies	1	12,532,979	73%
British "	4	23,902,530	156%
American "	4	14,767,145	215%

Viewing the conditions that have governed the development of population and distributed wealth, of realty and personalty, in this period in Canada, conditions that are generally recognized and agreed upon, several very pertinent questions naturally arise from a perusal of these statements, viz.:—

1st. Is it fair to assume that the very large increase in the average liability of the companies has had a bearing upon the loss ratio of the last ten or twelve years?

2nd. Has the increase in the average liability been made on the individual limits of the companies or by reason of the great re-insurance facilities under which many companies are working?

3rd. The statements above recorded show that in 1904 there was one company less doing business in Canada under Dominion license than in 1899 and only three more than in 1889. The average liability, in this period has, however, increased per company over 60 per cent.; to what is this restricted competition to be attributed?

4th. In viewing the comparatively small increase in the Canadian Companies' "Amount at Risk," the much larger growth in the British companies, and the still more remarkable growth in number and amount at risk of the American companies, is there anything in the conduct of the business that accounts for the remarkable showing?

Many and varied are the answers that these questions would doubtless produce if the intention was to ask for any serious expression of opinion thereon; we put it this way because the questions are not asked with a view to invite discussion, and discussion is not invited because we fully realize that the pressure of work at this season of the year prevents those who might otherwise be inclined to study and deal with the problems from taking any serious part therein.

It is, however, no secret that while thirty-seven companies reported to the Dominion Government in 1904, this number represents but a very small proportion of the companies writing Canadian business by re-insurance; it is indeed openly

admitted by the majority of the companies that they have re-insurance facilities which permit them to write from two to seven times the amount they themselves retain on a particular risk, and indirectly, therefore, the people of this country are helping to sustain (or ruin) companies scattered over the four quarters of the globe. For our purpose it does not matter whether the re-insurance companies have made or lost money out of their business in Canada, the fact remains that there is a large number of companies interested by re-insurance and the extent of the business transacted by them must reach a large aggregate. In the absence of any definite figures we must take an arbitrary percentage for the sake of illustration and argument, whether the percentage be far from or near to the mark. We assume, therefore, that twenty-five per cent. of the total business effected in Canada is re-insured in Foreign Treaty or unlicensed companies (and from the best information we have been able to obtain we think this figure underestimates, rather than overestimates the percentage), this means that in 1904 about \$250,000,000 of risks taken, and \$4,000,000 of premiums were passed out to companies unauthorized to do business in Canada.

If this business had been kept at home there would have been at the disposal of licensed companies a premium income large enough for twenty local offices! In other words the companies in doing that which they desire to prohibit others doing have created a barrier that restricts business competition, and, therefore, it is not desirable that it should be allowed to continue unchecked.

The reports of the companies to the Dominion Government can in no sense be taken as a correct record of the result of Canadian business to the companies; it is a well-known fact that the net result in many cases, if indeed this does not apply generally, is very much more favorable than the Government reports indicate, and, therefore, when the figures of the Blue Book are quoted in support of any argument the basis is unreliable for the reason stated. It would be an advantage to everybody if the returns were made to show the actual net underwriting experiences of the companies, and this can only be accomplished when all companies sharing Canadian business file reports correctly recording the results on a proper legitimate basis.

The State of New York has met this difficulty by the prohibition of all re-insurances in unlicensed companies, and that the majority of companies doing business in Canada are working under this law in that important state should lead to acquiescence of similar conditions in this country; the path having been blazoned let those most interested follow the light whither it naturally leads.

In the upbuilding of our country and in fostering infant industries let there not be overlooked the advantage that must necessarily accrue to the fire insurance interests, if that increment now given by licensed companies to the army of the unlicensed was left in the country to build up institutions now existing or that would soon be formed to abundantly provide for it. A paternal Government such as we happily enjoy might well take this matter up and deal with it as the Legislature of New York State has already done.

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THE QUEBEC BRIDGE

The Most Important Link in Canadian Transcontinental Railway Systems, and the Longest Single Span in the World.

By ALEXANDER McDougall, Consulting Engineer, Ottawa.

About seven miles above Quebec, Jacques Cartier in 1535 spent his first winter in this country and laid the foundations of New France, and within a few hundred yards of this spot the foundations of the Quebec bridge have just been completed—the first event initiating the opening up of Old Canada to the pioneer and fur trader of Old France, the second being the first step in the opening up of New Canada and of its industrial independence.

The City of Quebec is located on the north shore of the river St. Lawrence, about 180 miles below Montreal. On the south shore opposite is the City of Levis.

For over fifty years the project of bridging the river at this point has been discussed and has been a more or less live issue in all elections. The coming of an election was always heralded by the event of several survey parties in the field laying down locations for the bridge in those sections which it was desirable to influence.

Historical.

In 1852 Engineer Serrill submitted elaborate plans and a report for a suspension bridge with a 1,600 ft. span. He recommended the present location. At different times numerous other locations and schemes for tunnels, large ferrys, etc., were submitted. In 1884 the Quebec Bridge and Railway Company was formed to build the bridge but nothing was accomplished. In 1887 the Quebec Bridge Company was formed, the principal shareholders being the McGreevys and H. J. Beemer. This company, reorganized, is the one which is now building the bridge.

In 1896 Sir Charles Tupper endeavored to influence the Quebec elections by the promise of the initiation of a fast line steamship service from Quebec, and opinion was about evenly divided as to whether the fast line or the bridge was the greater necessity.

After the election in 1896 a campaign of enquiry was set on foot in *Le Semaine Commerciale* (of which Mr. Ulric Barthe, the present secretary of the Quebec Bridge Company, was then editor) in order to determine the wishes of the city and to gather information concerning bridge sites, etc. The bridge project was explained to the public in many leading editorials. In the fall of 1896 the Board of Trade took the matter in hand, and the Board of Directors decided on the present site and appointed E. A. Hoare chief engineer. During the winter new capital was introduced and the company reorganized.

Financial.

In March, 1897, Mr. Parent was elected a director. He subsequently, in the fall, became president, which position he has filled to date. Mr. Barthe was at this time elected secretary. Previous to entering the company it is likely that Mr. Parent had received assurances of assistance from Ottawa and the Provincial Government in the undertaking.

Before any assistance was given, however, \$200,000 of the capital was subscribed by the shareholders of the company, of which twenty-five per cent. was paid up. In 1899 the Federal Government granted a subsidy of \$1,000,000, one-third payable on the substructure and two-thirds on the superstructure. The City of Quebec gave \$300,000 and the Province of Quebec \$250,000. This, together with the \$200,000 subscribed, gave a total of \$1,750,000, it being intended to sell bonds for the remaining cost which was estimated as \$4,000,000 for the bridge proper, without terminals.

The bridge site, about seven miles from Quebec, is a little east of Cap Rouge on the north shore and a little west of the Chaudiere River on the south shore. At this point the St. Lawrence is 2,600 feet wide at high water and 1,900 feet wide at extreme low water, but for the greater part of this 1,900 feet it is over 100 feet deep, with a maximum depth of 180 feet and a current of over seven miles per hour.

Technical.

After thorough investigation the chief engineer determined on the following plan of the bridge:—

Total length, 3,300 feet; length of main span, 1,800 feet, which is 90 feet longer than that of any bridge built to date (the Forth bridge over the Firth of Forth has the record at present with a span of 1,710 feet); width 68 feet; total height, 300 feet above high water with a passage-way underneath 1,200 feet wide, above which the lowest point of the bridge is 150 feet above high water, giving sufficient clearance for the largest boat that floats. Accommodation is given for two railway tracks, two highways and two sidewalks.

The contract for the superstructure was let to the Phoenix Bridge Company, Phoenixville, Pa., and that for the substructure to M. P. Davis, of Ottawa. Mr. Davis started work in the fall of 1900, promising to complete same by November, 1902. This he accomplished.

The bridge superstructure consists of: Two approach spans 220 feet long, one on each side of the river; two anchor arms 500 feet long, one on each side, and one central span 800 feet long. The bridge is, therefore, symmetrical.

The bridge substructure consists of: Two abutments, two anchor piers and two main piers. The two abutments are founded on the solid rock, the two anchor piers are each 90 feet by 30 feet by 70 feet high. As their name signifies, these piers are not foundations in the ordinary sense of the word withstanding pressure above them, but are anchors which impose weight to counteract the weight of the centre span. From the bottom of these anchor piers clusters of twenty eye bars, each 10 inches by 2½ inches, extend through the centre of the pier and are secured to the shore end of the anchor arm span to receive the upward pressure exerted when the centre portion of the main span is inserted.

The north anchor pier is on the rock, the south anchor pier is on very hard clay, but is beyond the reach of the water.

The main piers are 150 feet by 49 feet on the bottom, and 133 feet by 35 feet on the top. The north main pier is 90 feet high; the south main pier is 110 feet high. At present these piers would seem to be only 30 feet high as the remainder is built below water level. They are carried down to their foundations by means of pneumatic caissons 149 feet by 50 feet by 25 feet, the maximum air pressure used being 35 lbs. to the square inch.

Although foundations have been carried to a greater depth in other bridges, nowhere have they been sunk to such a depth in similar material. The bottom of the river is a mixture of boulders, clay and sand—about eighty per cent. of the former. This all required to be drilled and broken by dynamite (to a small enough size to be taken up through the air lock) before being excavated, and the boulders around the cutting edge of the caisson, breaking in jagged points, penetrated the outer sheeting of the caisson when it was sinking. This increased the friction enormously and sinking was thereby considerably retarded.

On the south main pier it was also found necessary to cut 22 feet farther than was originally intended, until suitable rock foundation was found 59 feet below the bed of the river and 85 feet below high tide.

Despite these unexpected difficulties the contractor for the substructure finished within his time limit—that is by November, 1902.

The piers are built with a gray granite face, the material being obtained from a quarry on the Quebec and Lake St. John Railway. The courses are larger than is usual, the lower ones being four feet, built of massive stones of fifteen tons in weight. The body of the piers is concrete, in which is imbedded granite backing. The general appearance of the piers is very imposing and substantial. It is reported that C. M. Hays, on the occasion of his visit of inspection, declared it was the finest masonry in America. At the present time the masonry is somewhat dwarfed by the superstructure.

After the completion of the substructure, the Bridge Company surveyed and obtained options on its terminal lines, and designs were prepared showing that Quebec offered unrivalled possibilities for dock construction and extensions sufficient to handle, without congestion, the entire trade of Canada. These were no doubt considered by the Government when it forced the Grand Trunk to make Quebec, instead of Portland, the terminal of the Grand Trunk Pacific. Quebec, being the summer port, it was obvious that the bridge should be completed immediately, to give an outlet to the winter traffic on its way to a winter port in the Maritime Provinces. The other railroads—the Quebec Central,

the Intercolonial, the Grand Trunk Pacific, the Great Northern and the Quebec and Lake St. John—in the interests of which the bridge was being originally constructed, were also anxious for the early completion of and running privileges over the bridge and terminals.

In the fall of 1903, when the Government determined on the construction of the Grand Trunk Pacific and guaranteed its bonds, it also guaranteed the bonds of the Quebec Bridge Company to the extent of \$6,678,000, but only after the shareholders of the company had subscribed an additional \$300,000. This money was not only to build the bridge, but also the expensive terminals necessary to connect it with the city and the present railroads.

After this arrangements were immediately made to obtain delivery of material for the superstructure and to rush it to completion, but it was not until the spring of 1905 that the erection of the shore anchor arms could be proceeded with.

The Chief Engineer, in August, 1905, reported as follows:—

"The total metal manufactured to date amounts to 24,500 tons, out of which 8,300 tons are delivered at yard near the bridge site and 2,500 tons of permanent steel erected.

"Previous to the erection of any part of the permanent structure for the south anchor arm, a massive temporary steel structure for supporting the erecting traveller and members of the bridge as placed in position, had to be constructed, together with an interior trestle very substantially built of southern pine

timber principally used for railway tracks for delivery of material, and deck space for working purposes. These heavy structures were completed early this summer, together with the steel traveller and other plant all completely rigged with hoisting machinery, and equipped with the most complete electrical power and modern appliances, all of which will be used for the construction of the southern half of the bridge, to be afterwards removed for the same operation on the north side.

"On the south shore the bridges over the river Chaudiere, St. Nicholas Public Road and the long temporary trestles required for construction trains and delivery of structural materials for the cantilever bridge have been completed, and considerable progress made towards the completion of the heavy embankments—with steam shovel and cars—between the Intercolonial Railway and the bridge, and the heavy rock cuttings being finished early in the summer enabled the railway tracks (which were partly laid last year) to be continued to the bridge. Safety signals have been erected at the lumber railway crossing.



Traveller at Work, South Shore Anchor Arm.

"On the north side work is in progress between the cantilever bridge and Point a Pizeau, consisting chiefly of earth and rock excavation, construction of bridges over public roads, culverts, etc., in addition to the delivery of track and other materials made last year."

The most interesting feature of the bridge erection to the engineer is the operation of the gigantic traveller mentioned in the above report. This traveller, which is now erecting the steel work of the bridge, is 210 feet above the floor of the bridge, or over 360 feet from the water, and is rather an innovation in bridge erection. Before building, the Phoenix Bridge Company erected in their shop a complete working model of the bridge in order to test the efficiency of the traveller. It runs on rails outside the extreme limits of the bridge so that it has command over every piece of metal which enters into construction. The motive power is entirely electrical, and its operation has been very successful. An idea of its size can be obtained, as over fifteen miles of rope are used in its operation. An interesting part of the erection will be the insertion of the central span of 576 feet. Details of how this is to be accomplished have not yet been furnished by the Bridge Company.

Commercial and National.

The Quebec bridge will be a monument to the skill of Canadian engineers and contractors. It is regrettable that no Canadian company, at the time the contract was let, was able to furnish the steel, so that the entire bridge might be said to be the result of Canadian workmanship; but, apart from the engineering features, the bridge will be a monument to the business sagacity of a group of Quebecers. It is not too much to say that the whole of the eastern part of Canada, and undoubtedly the whole of the north-eastern part, depends on the Quebec bridge for an improvement in business conditions.

The City of Quebec, since the advent of steamships, and sailing vessels passed into disuse, became dormant and has made practically no progress. With a most magnificent harbor and a country of vast resources to the north, it practically was obliged to transact all its business during six months of the year, and towards the close of the navigation season the trade of the railroads having their termini at Quebec, like the Great Northern and the Quebec and Lake St. John, consisted of traffic chiefly for local consumption or for export to the United States.

It is stated at the commencement of this article that the erection of the Quebec bridge meant the opening up of new Canada and of its industrial independence. It

has been true that in the past the freight of Canada which was not sent to Buffalo via New York found its way to Montreal in the summer time and to Portland and Boston in the winter—some of the Canadian Pacific Railway business going to West St. John. Quebec suffered severely because, although affording very much better natural harbor facilities without any necessity for further dredging down the river, none of the great railways would make their terminals in Quebec, owing to the fact that storage in transit is impracticable—in other words, no business could be handled via that port except for immediate shipment, as when navigation closes all traffic ceases and such freight as might be on hand would have to be brought back via Montreal in order to reach an ocean port. Upon the completion of the bridge the great railways with their terminals in Quebec will be able, after the close of Montreal, to avail themselves of the storage facilities there during the entire year, as such warehouses will be filled at the close of navigation at Quebec with freight via the bridge for St. John and Halifax. And as it was natural for those

great railroads which have their terminals in Montreal to run to Boston and Portland, so it will be natural for those which establish their summer port at Quebec to run to St. John and Halifax, thus rendering Canada independent of the United States in transportation matters.

But outside of the construction of a great transcontinental railroad, which has now been assured, the bridge is a necessity for the building up of that vast country to the north and east of Quebec, the rich agricultural country

of the Lake St. John region and the vast pulp country of the Saguenay. The Canadian Pacific Railway heretofore was without practical competition in the passenger and freight business of Quebec.

In the winter of 1902 Quebec widely advertised a carnival. On the first day of the carnival a heavy snow storm and a great deal of ice in the river blocked communication by means of ferry boats, and hundreds of visitors who had come from the United States viewed the arches of welcome from the opposite side of the river, being forced to return to their own homes without ever putting foot in the city. Some of the more determined went around by Montreal, a distance of 360 miles, in order to get across one mile of river. Some still more determined, amongst whom were Lord and Lady Minto, employed a couple of adventurous boatmen who took them across through the fields of ice in small boats.

On the south shore naturally the railroads have been extremely anxious to obtain an entrance into Quebec. The Grand Trunk and the Quebec Central end at Levis, but ow-



General View from underneath the Approach Span.

ing to natural disadvantages they have not been able to secure the shipping facilities available on the north shore. With the completion of the bridge, the Grand Trunk and the Quebec Central Railways will send from the port of Quebec much of the freight which now goes to Portland and Boston, and will also give a connection for the paper and pulp mills and pulp limits of the north with the paper and pulp mills of the south.

It is expected that the Boston and Maine Railway, which is a connecting line with the Quebec Central, will ship from the port of Quebec after the completion of the bridge, and Canada may regain a little of her own when American railroads commence to use her ports.

Quebec City, from the city itself seven miles up to the

dertaking, and with its plans for dock improvements and with the Canadian, Northern and Grand Trunk Pacific both making it their summer port and the Canadian Pacific proposing to make it the terminus of larger steamers, it might well be said to be an undertaking of the first magnitude and importance, and the greatest credit is due to the skill which initiated and carried out the project. This includes nearly all the strong men of Quebec, but primarily responsible are Sir Wilfrid Laurier, the Honorable Chas. Fitzpatrick and the Honorable S. N. Parent. On the shoulders of the latter fell the carrying out of the details of the enterprise, and its success and freedom from anything unsavory augurs well for the construction of the Transcontinental Railway with him as chairman of the commis-



The North Abutment; the North Anchor Pier completed. The North Main Pier under construction. 2. General View from South Shore, showing Caisson for South Main Pier in place. 3. North Main Pier at low water. 4. Sand Hogs, 8 hour shift.

bridge site, offers one of the grandest natural opportunities for dock and shipping purposes of any port in the world. The terminal railways will run down along these docks into the City of Quebec, and the entire shipping of Canada could be handled at this one port without congestion.

It is to be hoped that the business sagacity of those who are responsible for the Quebec bridge and for the Transcontinental Railway will not cease with the completion of these two enterprises, but that sufficient dock extensions and improvements will be made at this port of Quebec, so that one harbor at least of this country will not merit the recent criticism offered by Sir Thos. Shaughnessy, with which most Canadians are familiar.

It is said that the Quebec bridge is a local enterprise for the benefit of Quebec City, but it is before all a national un-

sion; of whom Sir Wilfrid, in laying the corner stone of the Quebec bridge, spoke as follows: "But the man above all others whom we have to thank is my friend, the Mayor of Quebec, the President of the Quebec Bridge Company, lately appointed Prime Minister of Quebec. Were it not for his earnest and unfailing efforts, this ceremony on the shores of the beautiful St. Lawrence would not now be taking place."

The Borland Carriage Company, Limited, of Stratford, will enlarge their plant to twice its size and double their output. Their new addition will be of brick, 120 x 60 ft., three stories high.

Letters patent have been taken out by Sheldon and Sheldon, of Galt, incorporating their firm under the name of Sheldons, Limited. Capital stock will be issued for \$200,000.

CANADIAN CAR SERVICE RULES

New Regulations Governing the Imposition of Demurrage Charges, Effective March 1st, 1906.

THE promulgation by the Board of Railway Commissioners of a new set of Canadian car service rules is perhaps the most important action yet taken by that body, inasmuch as it affords a considerable measure of relief to every shipper in the country from the annoying and often apparently unreasonable tolls levied by the railways for the detention of their cars.

The new regulations became effective on March 1st. It is understood that they are of a provisional character, the desire being to see how they will work out in actual practice. Shippers are requested, therefore, to give them a fair trial, with the assurance that the Board will give careful attention to any material representations respecting them which any party may desire to make.

It will be observed from a perusal of the rules, which we publish below, that an extension of time has been secured for the unloading of coal, coke, and lime in bulk, and for the loading and unloading of lumber. An additional allowance of 24 hours is made for clearance of customs when freight is in bond, and Rule 4 states that car service charges shall not be collected when customs officials are responsible for delays. Rule 8 requires notice of arrival (unless waived by consignees), and satisfactorily provides for additional time for transmission of notice through the mails. The time for loading or unloading is changed by Rule 2 so that if cars are not placed by 11 o'clock a.m. free time does not commence until the following morning. Inclement weather conditions and bunching of cars in transit are satisfactorily covered by Rules 6 and 7, which provide for extension of free time without collection of demurrage charges.

In issuing these rules the Board have accompanied them by a memorandum, in which the case is reviewed at some length. It reads as follows:—

Memorandum Respecting Car Service Rules.

Numerous complaints and objections have been presented to the Board of Railway Commissioners for Canada respecting charges made by railway companies for demurrage or delay in the loading or unloading of cars by shippers or consignees, and the rules governing such charges. Some of these complaints and objections go to the foundation of the charge, and challenge its legality. Others relate only to the rate, or to the rules or their administration.

The practice of railway companies, before the constitution of the Board, was to charge lower tolls on goods in carload lots than for less quantities. This practice was sanctioned by the freight classification, and has been followed in the tariffs authorized by the Railway Act, 1903.

It appears to the Board to be reasonable that railway companies which deliver cars to, or place them at the disposal of, shippers or consignees, for loading or unloading, should have some means of limiting the time to be occupied in the loading and unloading, and should impose a reasonable additional or increased toll on traffic carried at carload rates for any detention or use of the cars, or continued occupation of its tracks, beyond such time as is reasonably required for loading or unloading.

From the public point of view, it seems to the Board that such a practice affords only a fair and just distinction between those who exercise diligence and those who do not, and is of general advantage in encouraging the rapid release of railway cars for further use.

After careful consideration, the Board is of opinion that

it is lawful for railway companies to make the carload rates higher in cases in which such delay occurs than in those in which it does not, and that it is within the power of the Board to determine the amounts of the additional tolls and to make general rules and regulations governing their imposition.

In some cases, parties have asked that the allowance of the charge be made conditional upon a provision for what has been called "reciprocal demurrage," or some penalty or charge for delay by railway companies in supplying cars, or in receiving, transporting, or delivering traffic. This latter subject requires more investigation and consideration than the Board has yet been able to give to it.

The Board deems it advisable to provide, as soon as possible, for the substitution of an improved set of car service rules, without the delay that would be necessary for investigation of and determination upon the other subject.

The Board has also been asked to allow an average to be struck of the times occupied in loading and unloading various cars, giving credit to parties for surplus time not used as against over-time. The Board does not think that there would be many cases in which this would result in any considerable advantage to such parties, and apprehends that any such advantage would be more than compensated for by the introduction of complications and grounds for dispute.

Objection has been made to the Board against the system by which several railway companies have joined in an association or bureau for investigating cases of delay in the loading or unloading of cars, and enforcing their charges therefor. This appears to the Board to be a matter of internal management on the part of railway companies, with which the Board should not interfere. It would be quite competent for any railway company to constitute a separate department and appoint separate officials for the management of this part of its business; and there seems to be no reason why several railway companies should not appoint joint officials for the purpose, or commit this work to a joint department. This system appears to offer some advantages in the way of securing greater uniformity in administration and providing some check on discrimination. The Board hopes that railway companies will endeavor to secure the fair and impartial administration of the rules; and in case it is found that the giving of preference cannot be otherwise prevented, it may be necessary to abolish the car service toll entirely.

The Board can only view such a bureau as an agency, and such officials as agents of the railway companies concerned, and it has carefully avoided the adoption of any rule which might appear to confer upon any such body of officials the right of deciding disputes as between the companies and the public, or the power to bind any but the railway companies.

The impracticability of framing rules adequate for all cases is conceded, so that while these rules are made imperative, the Board expects that, when in doubt, the officer appointed for the purpose will interpret them liberally, but without unjust discrimination or undue preference.

After giving every opportunity which seemed to the Board to be reasonably possible for the various interests affected to present their views upon the subject, the Board has adopted a set of rules to which it desires that a fair trial should be given. The compilation of these rules, and the settlement of numerous details, has involved a great deal of care and consideration, and has taken considerable time. The Board recognizes that some interests may not yet have

had notice of the enquiries being made, or an opportunity of fully presenting their views; and that, in some details, the rules now adopted have not come to the attention even of those who have discussed the subject before the Board. On that account, although desiring that a reasonable time may be taken for a trial of the new set of rules, the Board will give careful attention to any material representations respecting them which any party may desire to make.

The new rules are intended to take effect over the whole of Canada as respects all railways under the jurisdiction of the Board.

The Board's Order.

The full text of the Board's order reads as follows:—

WHEREAS numerous complaints have been made to the Board of Railway Commissioners for Canada with respect to the charges made by railway companies for delay in the loading and unloading of cars, and the rules regulating the same;

AND WHEREAS it appears to the Board that all such charges and rules should be disallowed, and that, in cases in which railway cars are, or are to be, loaded or unloaded by shippers or consignees, railway companies should be authorized, subject to the rules hereinafter contained, and by way of compensation for unduly prolonged detention and use of cars and use of tracks, to increase, as hereinafter specified, their tolls upon traffic carried or to be carried in carloads, or at carload rates;

AND WHEREAS it appears to the Board to be important, in the public interest, to secure the fullest possible use of railway cars, tracks, and equipment, and for that object to discourage the delay aforesaid;

NOW, THEREFORE, in pursuance of sections 23, 25, 257 and 275 of the Railway Act, 1903, and of all powers possessed by the Board under the said Act—

IT IS ORDERED THAT

1. Except as mentioned in the proviso to paragraph numbered 4 of this order, all tolls or charges heretofore charged or imposed by any railway company for delay in, or additional time used in, the loading or unloading of cars, whether under the name of Demurrage, Car Rental, or Car Service, or otherwise, and all rules regulating the same be and the same are hereby abolished and disallowed; and all railway companies subject to the jurisdiction of the Board shall henceforth cease to impose and use the same.

2. Except as mentioned in the proviso to paragraph numbered 4 of this order, every portion of any freight tariff, or bill of lading, of any railway company providing for a charge for delay in the loading or unloading of cars, or for demurrage, car rental, or car service, be and the same is hereby disallowed, and that the following tolls and rules be and the same are hereby substituted for such charges; and for the rules regulating such charges.

3. The railway companies be and they are hereby authorized to cancel the aforesaid portions of their existing freight tariffs, and to substitute the tolls and rules hereinafter specified, by the publication and filing of general notices in lieu of individual supplements to the various tariffs.

4. This order, and the rules hereinafter set forth, shall come into force and take effect on and from the first day of March, A.D., 1906; provided that nothing in this order, or in the rules hereinafter set forth, shall be deemed to apply to or affect the loading of cars delivered, or placed, for loading prior to the coming into force of this order, or to the freight delivered to a railway company for carriage before the coming into force of this order.

5. All freight traffic, in carloads or less, which is, or is to be, loaded or unloaded by the shippers or consignees thereof, shall be subject to the following rules, to be known as "The Canadian Car Service Rules":—

Toll.

Rule 1.—When cars are held under load, or awaiting loads, beyond the free time allowed by Rule 2, for any reason for which the consignee or shipper is responsible, a toll of one dollar per car, per day of twenty-four hours, or any part thereof, shall be charged to, and paid by, the shipper, consignee, or other party responsible therefor, in addition to all other tolls paid, or payable, in respect of the goods carried, or to be carried, in or on such car.

Free Time.

Rule 2.—Twenty-four hours shall be allowed the consignee, after notice of arrival, in which to pay the tolls or charges (if any), and give orders for special placing or delivery; (subject to Rules 11 and 15).

Forty-eight hours free time shall be allowed for loading or unloading (except as hereinafter provided). On cars placed for loading, or unloading, before or at 11 o'clock a.m., the free time shall begin at 1 p.m. following; if placed after 11 o'clock a.m., the free time shall begin at 7 o'clock a.m. following.

Exceptions: (a) Twenty-four hours additional free time shall be allowed for unloading coal, coke, and lime, in bulk, and for loading or unloading the following descriptions of lumber only, namely; boards, deals, and scantlings.

(b) Five days' free time shall be allowed at Montreal, and at tide-water ports, for unloading lumber and hay for export.

(c) In the portion of Canada to which the Manitoba Grain Act, 1900, and its amendments, apply, only twenty-four hours free time shall be allowed for loading grain.

(d) Twenty-four hours additional free time shall be allowed for clearance of customs, where the destination is a port of entry, making the allowance for clearance of customs, and for giving, placing, or delivery orders, forty-eight hours in all.

Where the destination is not a port of entry, forty-eight hours shall be allowed for clearance of customs at the outside port of entry.

Rule 3.—No car service toll shall be charged for Sundays or legal holidays.

Rule 4.—Car service tolls shall not be collected from the consignee for any delays for which the customs officials may be responsible.

Rule 5.—Cars shall be so placed as to be easily accessible at all times during the period allowed for loading or unloading. At stations where such placing is at the time reasonably practicable, cars shall be placed so as to be easily accessible on both sides. Time lost to the shipper or consignee through interruption, either by movement of trains, or shunting of cars, or any other cause for which the railway company is, or may be held to be, responsible, shall be added to the free time allowance.

Inclement Weather.

Rule 6.—If wet or inclement weather, according to local conditions, renders loading or unloading impracticable during business hours, or exposes the goods to damage, the time allowance shall be extended so as to give the full free time of suitable weather. But if the parties neglect or fail to avail themselves of the first forty-eight hours, or seventy-two hours, as the case may be, of suitable weather, they shall not be allowed additional free time by reason of such neglect,

Bunching.

Rule 7.—When, owing to conditions for which the railway company, or connecting railway companies, is or are responsible, or to any neglect or default of its or their agents or employees, or to storms or floods, or to accidents on a railway, or accident to the equipment of the railway company or companies, cars are tendered to the consignee in numbers beyond his ascertained reasonable ability to unload within the authorized free time, such additional time shall be allowed as may be necessary, with the exercise of due and reasonable diligence on the part of the consignee, to unload the cars so in excess.

Notice of Arrival.

Rule 8.—The consignee shall be promptly notified of the arrival of his freight, and shall be held to have been notified when notice of arrival has been delivered at his address, or place of business; provided that, if such notice be given later than 6 o'clock p.m., it shall be considered not to have been received until 7 o'clock the following morning. If notice be mailed, the consignee shall be held to have been notified at 7 o'clock a.m. of the day following.

Rule 9.—If the consignee fail to give placing or delivery orders within the twenty-four hours allowed by Rule 2, the car shall be considered to be intended for public team track delivery, and shall be placed accordingly; and, if not unloaded within the free time, such car shall be subject to the car service toll.

Placing Cars.

Rule 10.—The railway agent shall notify the consignee or his carter, on application, where his car has been placed for unloading. Any time within the free time allowance lost to the consignee in so doing, for which the railway company is responsible, shall be added to the free time allowance.

If a car has been placed before 7 o'clock a.m., and at that hour the agent or his representative is unable or fails to inform the consignee or his representative, on application, as to the placing of the car and where it has been placed, then the free time shall not commence until 12 o'clock noon following, unless the consignee commences to unload before noon, in which case the time so lost to the consignee shall be added to the free time allowance as aforesaid.

Rule 11.—Freight for which the railway company holds previous standing orders from consignee for placing on designated tracks or private sidings, shall not be entitled to the extra twenty-four hours allowed by Rule 2 for paying freight charges and giving placing or delivery orders, but when in bond shall be entitled to the twenty-four hours allowed by Rule 2 (d) for clearance of customs.

Rule 12.—When both cars and tracks are owned by the same private party, no car service tolls shall be charged.

Rule 13.—The delivery of cars to private tracks shall be considered to have been made when such cars have been properly placed on the tracks designated or when they would have been so placed but for some condition for which the shipper or consignee is responsible. If cars cannot be so placed the railway company holding them shall so notify the consignee, in order that he may have the opportunity of designating some other siding on which he is willing to load or unload, if he so desires.

Re-Placing.

Rule 14.—If, after placing, cars are ordered to another siding on the same road, at the same station, to complete loading or unloading by the same shipper or consignee, the free time shall be computed from the original placing, less the time occupied in replacing the car.

Rule 15.—If, after arrival at destination, a car is re-consigned under switching arrangements, the original consignee alone shall have twenty-four hours in which to give orders for special placing or delivery; and he shall pay one dollar per day, or any part thereof, for all time in excess of the twenty-four hours, so that the final free time of forty-eight hours, or seventy-two hours, as the case may be (authorized by Rule 2), shall still remain to the party who accepts delivery.

Congested Sidings.

Rule 16.—If an authorized employee upon a railway which performs switching services gives notice that such railway is unable to receive cars for private sidings, owing to conditions for which the shippers or consignees are responsible, then any other railway company having cars for such consignees shall so advise them, and the car service toll shall be charged until the cars on such private sidings have been unloaded or loaded, as the case may be, or until such sidings have been otherwise cleared.

Cars Waiting "Orders."

Rule 17.—Cars held in transit for inspection, grading, cleaning, bagging, completion or change of load, or change of destination, under a through rate from the original shipping point to the final destination, with or without a stop-over charge, and detained over the time allowed for such purpose in the published tariffs, shall be subject to the car service toll. If such shipments are transferred to other cars, the car service tolls shall follow on the cars to which transfer is made.

Logging or Industrial Roads.

Rule 18.—Manufacturers, lumbermen, miners, contractors or others, who have their own tracks and motive power and handle cars for themselves or other parties, shall be charged car service tolls on all cars delivered to them from the time placed upon the interchange tracks until returned thereto, after allowance has been made for the time necessary for them to do the switching (not to exceed twenty-four hours), and for the free time authorized by Rule 2.

Miscellaneous.

Rule 19.—Cars shall not be held back for the purpose of evading these rules. Loaded cars held back for cause must be reported.

Rule 20.—When cars are delayed or refused by consignees because of alleged incorrectness in the railway weights or charges, car service tolls shall not be charged if the railway weights or charges are proved to be incorrect.

Rule 21.—If payment of car service tolls properly due be refused, delivery of only the car or cars on which such car service tolls are due shall be withheld, by means of sealing or locking, or by placing where such cars only shall not be accessible.

If the owners or users of private sidings, or the owners of railways referred to in Rule 18, refuse to pay any car service tolls which may already be due, delivery of cars to such sidings or railways shall be suspended, and deliveries shall be made on the public team tracks until such unsettled car service tolls have been paid.

Rule 22.—In this order and the rules therein contained:—

(a) The singular includes the plural, and the plural the singular, and the masculine the feminine, as the case may be;

(b) Any reference to a rule by number is to be considered as a reference to that one of the foregoing rules which is so numbered;

(c) The expression "car service toll" means the additional or increased toll authorized by Rule 1.

THE CANADIAN COAL INDUSTRY

The Extent of our Fuel Areas, their Present Production and their Possibilities.

The expression "Mineral Wealth of a Country," usually conveys to the average mind glittering vistas of gold-fields, of silver deposits; in some cases the thought extends to the more common metals, nickel, copper and iron, but as a rule it is only on second thoughts that fossil fuel is properly placed at the head of the list of the mineral resources of a country. It has been aptly said that "coal is the mainspring of modern civilization," and it is certain that the industrial prosperity of a nation can be gauged by its consumption of coal.

Canada's Coal Production.

In 1904, the latest year for which accurate statistics are available, Canada produced 7,509,860 short tons of coal, valued at \$14,599,090, and consumed approximately 11,500,000 tons, of which about 5,000,000 represent imports.

To the uninitiated, these figures do not represent anything definite, so that it is advisable to compare them with the other principal products of the mine. The Mines Section of the Geological Survey publish each year an interesting table of such comparisons, the last of which, (1904) we reproduce here in full. It illustrates the contribution of each mineral to the grand total of the mineral output of Canada:—

Product	Per cent. of total Mineral Production of Canada.
1 Coal and coke	27.32
2 Gold	27.18
3 Building materials	9.39
4 Copper	9.13
5 Nickel	6.99
6 Silver	3.53
7 Lead	2.71
8 Cement	2.07
9 Asbestos	1.96
10 Petroleum	1.63
11 Pig Iron (from Canadian ore)	1.49

By glancing at the table we see at once that the item "Coal and coke" assumes first place, and that all the gold of the Yukon, to which is added that of British Columbia, of Ontario, and of Nova Scotia, falls slightly short of the value of the coal produced in Canada, and this only represents a little more than one-half the total coal consumed by the country. The figures which stand opposite copper, representing the production of the British Columbia mines, of the copper-nickel deposits of Sudbury, of the Eastern Townships deposits of Quebec, are just one-third of those which stand opposite coal and coke. Such comparisons show the importance of the Canadian coal industry.

Comparison With Other Countries.

The total coal production of the world in 1904, according to the "Mineral Industry," was over eight hundred and sixty-six million metric tons, the main producers being the following countries:

	Metric tons of 2,204 lbs.
Asia	
India	7,682,319
Japan	11,600,000

Australasia.

New South Wales	6,116,126
New Zealand	1,400,000
Other Australia	769,723

Europe.

Austria-Hungary	40,650,000
Belgium	23,380,025
France	34,502,289
Italy	332,000
Russia	18,600,000
Spain	2,800,000
Sweden	320,984
United Kingdom	236,147,125

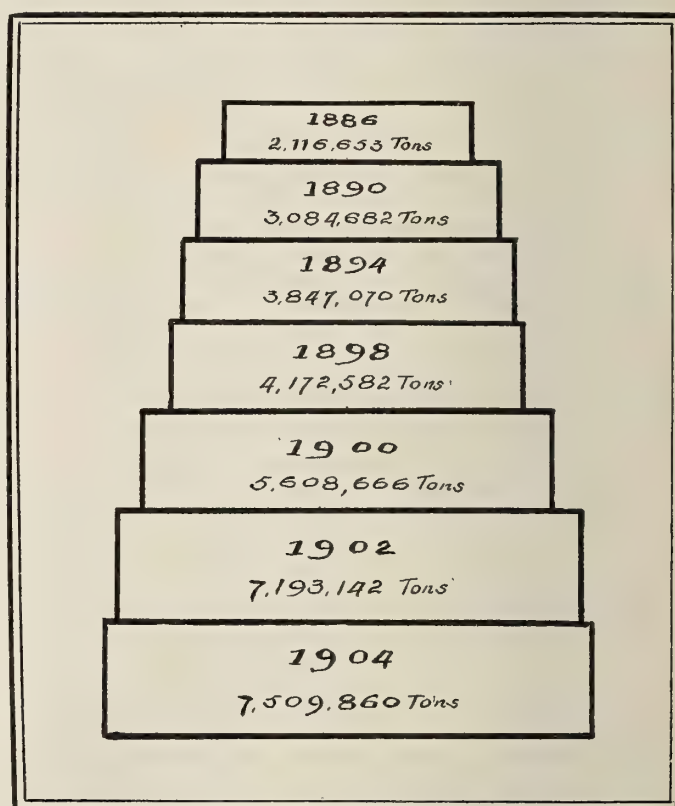


Diagram showing Canada's Growth in Coal Production since 1886.

North America.

Canada	6,814,755
United States	318,275,920

South Africa.

3,015,000

All Other Countries.

4,250,000

A comparison of the above figures shows that Canada stands ninth in actual tonnage. We must consider, however, that if we compared the production per capita, the Dominion would stand much higher. Another consideration is that in most countries, in all European countries at least, the coal deposits are being taxed to their utmost to yield the production recorded, whereas here, with very little alteration in the present equipment of our mines, the output could be doubled if the market conditions required, and if need should arise the production could be increased tenfold within a year or two.



Natural conditions in Canada are very favorable for a great extension of the coal industry in the near future. We have practically inexhaustible supplies of this mineral fuel on both sea-boards. In Nova Scotia vessels can be loaded directly from the mine, and the coal finds a market all along the Atlantic Coast. Similar conditions prevail on the Pacific Coast where the Nanaimo collieries of Vancouver Island load vessels directly from the mines' storage-bins.

As to the actual cost of "getting out" the coal, we have natural facilities here, which, from the mining standpoint, are nearly ideal. A simple comparison will illustrate this. In Great Britain, the coal is deeply buried, necessitating shafts through the superincumbent strata, reaching a depth in some cases of 3,500 feet, and costing anywhere from \$30 to \$200 a foot to sink; in Canada a shaft of 300 feet is thought to be very deep, and most of the coal is extracted by means of slopes, which are tunnels sunk in the coal seams. In Great Britain, the coal seams are rarely more than $2\frac{1}{2}$ to 4 feet thick, and are often interrupted by what are called faults, an accident in the coal beds which breaks the continuity of the seam. In Canada the great number of the coal seams permits of choosing the most favorable thicknesses, which run from 6 to 10 feet. Faults are rare; with the exception of a very few cases, the seams in the different coal fields of Canada are remarkably continuous. And yet, in spite of these adverse conditions, Great Britain, in 1904, mined 236,147,125 metric tons of coal.

The Coal Fields of Canada.

In Nova Scotia there are several separate basins of bituminous coal, which have been worked for a great many years. New Brunswick has a limited area of coal of good quality, but very thin seams. Quebec and Ontario are both devoid of coal and lignite, at least south of the 52nd parallel of latitude. In the Western provinces we have large areas underlaid by coal beds, the quality varying from lignite, which is brown coal, low in fixed carbon, to bituminous and even anthracite. On the other side of the watershed of the

Rocky Mountains, the Crow's Nest Pass Coal field is being worked energetically, and with the Vancouver Island fields, form the important ones.

Nova Scotia.

In this province there are four distinct producing coal areas. (1) The Sydney coal field; (2) the Inverness coal field; (3) the Pictou coal field; (4) the Cumberland coal field.

Sydney Coal Field.—This is situated in the north-east corner of the county of Cape Breton, occupying a land area of 200 square miles, besides a very large submarine area. This was the first coal field opened in Canada, work in it having begun as early as 1785. It is to-day the largest producer. An idea of its importance may be gathered from the fact that there are nine seams which can be worked, with an aggregate thickness of forty or fifty feet. The coal is bituminous, of excellent quality for steam purposes and for the manufacture of gas. There are several companies working in this area, the leading one of which is the Dominion Coal Company, with head offices at Glace Bay, its output being more than half the total coal production of Nova Scotia. It has eight well equipped collieries, the largest of which, called Dominion No. 2, can handle 6,000 tons a day. This colliery is the most modern in North America, and contains a combination of all the latest improvements. Other well-equipped collieries in this field are the Nova Scotia Steel & Coal Co., Gowrie and Blockhouse Colliery, The Sydney Coal Co. The production of the Sydney fields amounts to over 4,000,000 tons of coal a year.

Inverness Coal Field.—This comprises a series of narrow areas on the western shore of Cape Breton Island, in the county of Inverness. Collieries are working at Port Hood, at Inverness, and at Port Mabou. The coal measures also extend under the sea. While the field has not the importance of the Sydney field, yet it is capable of great development and extension. Its annual production is some 300,000 tons.

Pictou Coal Field.—Work was begun in this field about one hundred years ago. It is situated in Pictou County, and while its area is only about twenty-five square miles, it contains very large seams of excellent coal. Four of these, which are at present being worked, have the thickness of 38



A Typical Coal Mining Village.

feet, 30 feet, 15 and 12 feet, respectively. There are five or six collieries in this district. The annual output totals 800,000 tons.

Cumberland Field.—This is the most westerly of the Nova Scotia coal areas, and lies partly adjacent to Chignecto Bay. The largest colliery is at Springhill, where three seams are worked, each 10 feet thick. The coal is excellent for steam purposes, and the produce of the mines is largely used by the Intercolonial and the Canadian Pacific Railway. There are several smaller collieries in this field of which the annual output is some 700,000 tons.

New Brunswick.

Only one field of economic value is at present known in New Brunswick. It is situated at the head of Grand Lake, partly in Sunbury County and partly in Queen's. Work has been carried on intermittently since 1825. The quality of the coal is good, but the seams are thin, from 15 to 30 inches. Operations are on a limited scale, seldom exceeding 18,000 tons annually, although it has been calculated that the quantity of coal underlying this district is between 100 and 150 million tons.

Manitoba and North-West Provinces.

The coal seams of the eastern provinces occur in carboniferous rock, but in the plains and in the foothills in the western part of Canada, they are found in cretaceous rocks which belong to a much younger formation. In Southwestern Manitoba and in Saskatchewan the coals are lignites, but as we approach the Rocky Mountains the character improves, owing to alteration and disturbances undergone by the rocks. In the foothills some excellent bituminous coal is found, and near Banff in Alberta, there is a seam of anthracite.

Dr. Dawson, late director of the Geological Survey, has estimated that the coal-bearing region of the North-West, between the international boundary and the 56th parallel of latitude, has an area of 65,000 square miles! It is difficult to realize what tremendous prospective value such an

asset represents. Being the only fuel available over thousands of square miles of agricultural land, the coal deposits of the North-West necessarily play an important part in the development of that country. There are well-equipped collieries at a great number of places along the main line of the Canadian Pacific Railway, on the Crow's Nest branch, on the Edmonton branch, and the construction of the Grand Trunk Pacific and the Canadian Northern Railways will certainly lead to the opening up of new coal areas.

In South-East Saskatchewan, there are several companies working in the lignite field, of which Estevan is the centre. The produce is mainly shipped to Winnipeg. Farther west, nearing the foothills, the quality of the coal improves, so that at Frank and Coleman, on the Crow's Nest branch, and at Canmore, on the main line of the C.P.R., we have excellent bituminous coal. But the most remarkable deposit is at Blankhead, near Banff, where the Pacific Coal Company is working a seam of anthracite equal to the Pennsylvania product. Around Edmonton there are several mines working lignite seams, which supply the local market.

The yearly output of the North West Provinces amounts



—Photo by Dodge, Glace Bay.

Dominion No. 2 Colliery, Glace Bay, Cape Breton. The most modern colliery of North America. Equipped for an output of 6,000 tons of Coal a day.

to 700,000 tons, and this will increase greatly as the country becomes more settled.

British Columbia.

Three fields are now producing in British Columbia, viz., the Crow's Nest Pass field, the Nanaimo field and the Comox

field, the two last being situated on Vancouver Island, and the first near the Alberta boundary. Besides these, mineral fuels are known to exist in many other places which may in time develop into producing districts, such as the Nicola Valley coal basin, the Queen Charlotte Islands areas, and others. These constitute a valuable asset which could be drawn upon as need arises.

Crow's Nest Pass Field.—This is situated in the south eastern part of the province, to the west of the summit of the Rocky Mountains, which form the boundary between Alberta and British Columbia. This coal bearing basin has an area of about 230 square miles, the greater part of which is underlaid by seams of coal, the total thickness of which is over 200 feet. Supposing half of this only to be available, we have here a supply amounting to 22,600,000,000 tons of coal! Only one company is at present operating in this field, the Crow's Nest Coal Co., who have well-equipped collieries at Coal Creek near Fernie, at Michel, and at Carbonado. The great part of the output is converted into

ANALYSES OF CANADIAN COALS

	Moisture	Volatile Matter	Fixed Carbon	Ash	Sulphur
Sydney, Nova Scotia (Harbour Seam)	.80	27.85	67.05	4.30	2.32
Inverness, Nova Scotia (Port Hood)	2.47	38.48	50.39	8.66	
Pictou, Nova Scotia (Drummond Colliery)	1.43	30.76	59.89	8.79	0.56
Cumberland, Nova Scotia (Springhill)	.63	28.90	65.16	5.31	1.80
Estevan & Roche Percée Sask. Lignite	17.17	29.51	44.36	8.35	
Old Man River, Alberta	2.36	32.07	56.37	9.20	
Banff, Alberta. Anthracite, Washed Coal .....	.40	6.02	89.40	4.18	
Michel, Crow's Nest Pass, B.C.	1.00	18.93	70.13	9.5	.44
Nanaimo, Vancouver Island	1.88	33.27	54.67	9.4	.78

coke in 1,128 ovens, the product of which finds a market in the smelting centres of the province, and Washington State.

Vancouver Fields.—On Vancouver Island there are two distinct areas, both on the east coast, but separated by about 60 miles of non-coal-bearing rocks. The southern, or Nanaimo area, was opened in 1851. It has a land superficies of 200 square miles, and contains several workable seams, the thickest being from 8 to 12 feet. There are five collieries in this district operated by two companies, the Western Fuel Co., and the Wellington Colliery Co. A large proportion of the coal is shipped by boat to San Francisco.

The Comox field is some 60 miles north of Nanaimo. It has a land area of 300 square miles, with a submarine extension. There are nine seams, the thickest of which is 10 feet. The only company operating in this coal basin is the Wellington Colliery Co.

Yukon Territory.

This is the last area to be considered. There are several known occurrences of lignite and lignitic coals in the valley of the Yukon River and its tributaries. The coal basin which has been worked is situated in this valley some twenty miles below Dawson, and has an area of 200 square miles.

Two companies have collieries in this field, the product of which is partly shipped to Dawson, and partly used by the river steamers.

It will, therefore, be seen that the coal wealth of Canada forms an invaluable asset of the country, and that it can be relied upon to last for generations. It is to be deplored of course that the two central provinces of Ontario and Quebec are devoid of accessible coal, but this is offset by their close proximity to the United States coal fields, from which they derive the greatest part of their supply. In the northern portion of these provinces there are large tracts underlaid by lignites of good quality, but these are not available at present owing to the lack of transportation facilities.

SCIENTIFIC NOTES.

Banquet Cooked by Electricity.

THE biggest dinner ever cooked by electricity was served January 31st, by the Ontario Power Company, which had for its guests the members of the Canadian Society of Civil Engineers, the commissioners of the Queen Victoria Niagara Falls Park, and a number of others. Covers were laid for 225. The Ontario Power Company has recently installed a very large electric kitchen for its own use, which absorbs about 40-h.p. A meal for 300 can be prepared with ease.—*Electrical World*.

How Shot Are Made.

"It was a strange experience," said the huntsman. "As I ascended the spiral stairs of the tower I saw shot falling, like rain, around me. The shot tower was 200 feet high. At its base there was a tank of water for the shot to drop into. If it fell on the earth, you know it would be flat instead of round. On top of the tower was a huge boiler filled with molten lead. The manager ladled the lead into a percolator, a kind of strainer, and thence it fell into the cistern of cold water 200 feet below. It took it three seconds to fall. They made different sizes of shot on the tower by using different percolators—big holes for big shot, small holes for fine shot, and so on. The water in the cistern had to be changed every little while. It would have become so hot otherwise that it would have kept the shot soft."—*Montreal Star*.

Water-Proof Cement.

A water-proof cement has just been patented in Germany. A mixture of vegetable wax and caustic lime in boiling water is added to unground Portland cement clinker, and all ground together. The inventor makes the claim that one half inch coating of this cement placed on a brick wall will render it absolutely water-proof. The formula is given as follows:—

To each two hundred weight of cement clinker is added a mixture of three-fourths of a pound of Japan vegetable or berry wax, and one ounce of caustic lime which has been dissolved in 14 pints of boiling water. These ingredients are thoroughly mixed and when cooled are dried and ground very fine with cement clinker.—*American Manufacturer*.

Heligoland Disappearing.

Since Heligoland was ceded to Germany in 1890, it has lost a considerable area through the collapse of its sandy cliffs as well as through a definite sinking on its south side. Engineers are endeavoring to safeguard the island from demolition by filling crevices in the rocks and by building breakwaters, but the very sea floor is now found to be without stability. Its circumference to-day is less than 3 miles as against 3¾ miles in 1890.

SYSTEM IDEALIZED IN THE POSTAL SERVICE

Behind the Scenes in a Big Post Office. How Mail Matter is Handled in the Minimum of Time and with the Least Possible Chance of Mistake.

As a system the Canadian postoffice service has no rival. There is no other organization which covers the entire half of the North American continent with its veins and arteries, and is at the same time controlled from a single heart—the Postal Department at Ottawa.

Railroads cover part of the country, but there are more than thirty railways in Canada, each with its separate system. The postal service extends where the railroad has never been. Letters bearing the post mark of Canadian offices go to Fort Macpherson at the mouth of the Peel River, under the midnight sun, to Herschel Island up in the Arctic Ocean, to the wilds of Labrador, to the innermost defiles of the lonely Caribou, and the outermost island on the Pacific Coast. But there is only one Postal Department.

Telegraphs have their nerves from sea to sea and far northward; but two hundred miles north of Edmonton, except in the Yukon, there is not one telegraph pole. Yet wherever there is a citizen of Canada, no matter whether he catches cod, traps the beaver, drives a team in the lumber woods, or runs a blasting outfit in a mine, the Canadian postal system ties him to civilization, when so far as railways and telegraphs are concerned, he might still be a savage.

The letters read and written in Canada are carried by all kinds of conveyances known to motive power, except airships and balloons. Steam railways, electric roads, steamboats, rowboats, canoes, men on horseback, stages, freight-waggons, dog trains—all are part of this great intelligence bureau. Perhaps the ox-cart should be excepted, and yet into the settlements north of Prince Albert, Sask., letters were carried but a year or two ago in carts drawn by oxen, and are perhaps carried so still.

No country in the world has such an enormous mileage of mail route compared to population as Canada. The distances of this network of correspondences are paralyzing. From Edmonton, which is the last postmark on letters sent to the Mackenzie River country, to say, Fort Macpherson, is more than 2,000 miles, as the trails and the rivers run. A two-cent stamp carries that letter. The revenue from the North Pole branch of the service is not big. Somewhere across Canada, and not far from the route of a transcontinental line of railway, a line may be drawn, north of which mails are carried at a dead loss. Yet the letters keep going just the same, and there is no arithmetic able to compute what this loss of revenue means in a direct gain to the cause of civilization. Railways are the swiftest of all civilizers. But long before the locomotive gets within whistling distance of a future trapper in the Great Bear country the mail service of Canada has helped to civilize his grandfather.

Such is the romance of the postal system in Canada. And the romance pays. Why? Because it is based on the biggest system in Canada, and a system so thoroughly organized that it refuses to digest a dead letter, but throws it back on the writer.

But although the mail service is in part independent of the railway, the mail system follows the locomotive. Necessarily where the people are most numerous, traffic the heaviest and railroads the swiftest, the letter-carrying industry is at its height. Wherever the centre of population is there must be the greatest number of letters received and delivered according to population. And the more rapid the growth in population, the greater the proportion of letters, newspapers,

and printed matter of all descriptions carried. More stamped envelopes and parcels are sent out of one big Toronto office building in a day now than were handled in a day at the postoffice of a fair sized town twenty years ago. The postal system has the advantage of comparative cheapness, coupled with quick delivery, and complete ramification.

Once put a stamp on an envelope or a parcel, and it means delivery in the minimum of time with the least possible risk. It makes no difference whether the thing sent is a typewritten letter or a bundle of newspapers, a photo or a package of garden seeds, a box of roses or a sewing-machine bobbin, a book or a sample of dry goods—everything goes. This astounding variety of grist to the mailing mill is a feature of modern civilization.

Toronto the Centre.

Just where the centre of population, and therefore of the mail system, is in Canada nobody exactly knows. But at present it is not far from Toronto, in a line from East to West. One million dollars for one year's stamps—this, roughly speaking, is last year's record for the Toronto postoffice. In the year 1900 the stamp revenue was under \$500,000, an increase of 20 per cent. a year. Montreal postoffice took in last year just about two-thirds of the stamp revenue received at Toronto. This ratio of three to two in favor of Toronto has been a pretty steady one for years back. Casually speaking, it is as though three cents were still the price of a stamp at Toronto, which on a basis of revenue must be conceded the premier place in Canada.

This aggregate works out roughly to just about four dollars a year spent in stamps for every man, woman and child in the city. On the same basis the postage stamps used by the whole Dominion in a year would round up \$24,000,000, but of course this is more than twice the actual amount spent.

What gives Toronto its pre-eminence as a postal centre? Not merely population, for Montreal, with two-thirds the postal revenue has nearly one-third more people. Not merely the fact that somewhere between Toronto and Montreal is the centre east and west of population in Canada, although this is probably a factor.

The first reason is above all, commercial. Toronto is an industrial city. The bulk of the revenue from the mails is commercial, and is derived from stamps used on circulars, catalogues, booklets, newspapers and publications of various kinds. The friendly letter percentage is a mere fraction. One huge factor in this revenue is the immense mail order business done by departmental stores. The case is cited of a woman on the far side of Vancouver Island who got shirt-waists sent by mail from Eaton's in Toronto. Similar cases exist all over the country. The amount spent in the mailing system by one big department store in Toronto totals roundly \$100,000 a year. This includes the mailing of catalogues, and the sending of goods by mail, but does not, of course, include the amount spent in sending for the goods.

Again, there are nearly ten thousand students in Toronto. Students write more than the same number of laboring men or mechanics. Some of them write home for money pretty regularly, which may often mean a registered letter. As an educational centre, Toronto stands first in Canada. Generally speaking, where there is most education there is

most reading and therefore most writing. All the colleges have prospectuses or calendars to send out, besides a large mail service answering letters of enquiry.

There may be a dozen other reasons for Toronto's postal supremacy, but clearly the biggest reason is commercial. In this the growth of the West has been a big element. Every thousand of population added west of Ontario means more work for the factories of Ontario and the wholesale houses of Toronto. The West more than any other cause has helped to swell the postal revenues of Toronto to a million a year. At the same rate of increase, depending largely on the growth of trade in the West, in ten years more the postal revenue of Toronto will be four millions and that of Montreal about three millions.

Then as postal revenue follows trade, so also it follows railways. Every mile of new railway means people who

It is all a case of the development of distributing centres, similar to nerve ganglia in the human body. At the bottom of this are the railways. Telegraph lines follow railways, just as nerves follow muscles. The postal service does the same. The railways are the necessary carriers both of trade and of the correspondence that makes and maintains trade. In order to be effective in a fast age letters must be despatched as quickly as possible. The postal department, therefore, is the encyclopedia of railways, and of timetables.

Wherever railways converge, there is a mail distributing centre. London, Stratford, St. Thomas, Guelph, Hamilton, Toronto, Montreal—these are mail-distributing centres. All take their share in the wholesaling of the mails. From each of them the railways, and therefore the mail routes, radiate in all directions. Toronto leads in this distribution. Here



Cancelling Letters at the Rate of 50,000 per Hour.

must buy stamps in order to belong to civilization. Every daily newspaper added to the list must mean added revenue to the postoffice. Toronto is a newspaper centre. The daily paper has got into the farm house, and out on the prairie, and into the mining camp. The postoffice is the steady index of the extension.

Again as telegraph and telephone systems ramify, the postal revenue increases. There used to be a theory that the telephone would decrease the postoffice receipts. The contrary has been the case. Telephones stimulate business. Telegraphs do the same. A telegram is almost invariably followed by a letter, and business is often done that without the telegraph and the telephone would not be done. This operates particularly in favor of the big distributing centres, and in a minor degree against the small town. The bigger a town becomes the more its ratio of business, and therefore of postal revenue increases.

converge a large part of the mails from western and eastern Ontario, from the United States, from England and foreign lands, from New Ontario and from the North Shore, including the great feeder areas west of Ontario to the Pacific Coast, some for distribution in the city, much of it for redistribution in various directions.

The number of letters stamped at the Toronto general postoffice last St. Valentine's Day was 120,000. These were merely the letters mailed in the office itself and in the boxes contiguous thereto, and would represent but a fraction of the total number of billet-doux sent out by Torontonians on the 14th of February, as a large bulk of all the mail is received and stamped in the five stations and the 26 sub-stations within the city limits.

A fair working estimate of the amount of second, third and fourth-class mail matter handled by the Toronto postal service is from thirty-five to forty tons a day. This includes

all mail received and sent out. Of this mass of mail matter a considerable percentage belongs to the foreign mail. A large bulk of this is handled at Station A at the Union Station, which is the depot for all second, third and fourth class mail matter.

The Toronto service, as mentioned above, includes five stations and twenty-six sub-stations. There are in all 160 letter-carriers, most of whom get their loads at the general office on Adelaide Street. The entire postal staff, counting those of stations and sub-stations, is upwards of 300 people.

Inside a Big Post Office.

In this rather classic old building the visitor soon finds that he is in contact with as nearly as may be a perfect system. Never was a man-of-war in which every man better knew his place. This is not for the sake of mere militarism. It means that the P.M.G. and his subordinates all the way down to the stage-driver on a country route understand psychology. They know if there's one thing a man doesn't want to have to wait for it's a letter. There is no need of a clock in the postoffice to remind the clerk that time is flying. Every employee there has it drilled into his nervous system that time is money, and that to keep the great public waiting for its letters is next door to a crime.

There are some things about a general postoffice that are likely to fool one. Passing up the alley to the east side for instance—the lane out of which the posties march with their plumped-out bags of reading matter—you notice a large heap of big mail sacks bulging full and tagged "Dead." Immediately, you conjecture, "Ha-ha! Dead letters, eh? What a lot of careless people, and lost people, there are in Canada anyway! Well, it's no wonder considering what a frightfully big country it is."

But the sacks are only full of old papers, unclaimed newspapers and circulars and magazines and pamphlets, and a score of other things that keep the printing presses of Toronto busy. Nobody wanted them. The man who printed them didn't want them. The man to whom they were sent didn't want them. They had to come back—corpses; part of the undigested matter in this big system.

Inside the door and you are at once in the midst of a bewildering hurly-burly. Everybody seems to be glued to some part of the machine, and you may stand and look at it for an hour, unless some obliging clerk chaperones you, without finding out precisely what some of the bees in this big human hive are doing. Just where to begin the clerk hardly knows. It's mostly A B C to him; some of it is algebra.

But to begin where the public leaves off. There are five slots in the postoffice wall into which the public may drop letters. Four of these are outside marked respectively "City," "Canada," "United States," "Foreign." The one inside is general. This much of sorting the postoffice asks the public to do for itself. Some people don't do it. Then there's trouble inside for a clerk who must see that a letter intended for Timbuctoo doesn't get into the sorting for Hamilton or Spadina Avenue.

The first thing to do is to get the letters postmarked. Once this was done by hand. Most of us remember the careful postmaster in the country store who used to read the address with a wise smile as he clapped on the stamp, on which that morning he had carefully changed the date. And a year or two later, when he went to live in town, it was an object of much curiosity to watch the clerk slap on the marks at the same rate that a lather drives nails. But this nimble gentleman was a country funeral compared to the electric stamper that eats up letters in the Toronto postoffice at the rate of 45,000 an hour, or 750 a minute, or

nearly 13 every second! This is the average rate. The maximum is 60,000 an hour, or 1,000 a minute. One man feeds the letters into this machine, which with two rollers working in opposite directions, slides a handful through in the same order as shingles go on a roof.

But before he gets them the letters must be faced. This is the work of a whole staff of clerks who stand on both sides of a long chute, each engaged in turning the letters face upwards so that they may be stamped on the stamp-corner. These stamping-machines, which have practically revolutionized the stamping departments, were introduced into Canada by Mr. Geo. Ross, Chief P. O. Inspector for Canada. Those in the Toronto office have been in use about five years.

Well, in an hour in the evening—for this is the time when the mails begin to congest in the postoffice—50,000 letters are postmarked with one of these machines. The next thing is to distribute them. Some are intended for city delivery, some for out of town in Canada, some for the United States and some for the foreign mails. For each of these there is a place in the big many-compartmented room that reaches clear from Adelaide to Lombard St. The city delivery department is at the rear, and occupies nearly half the floor space. Duly stamped the city letters are given a primary sorting. This is highly important, and an error here often leads to serious delay in getting a letter to its proper street and number.

Now so far as the system is concerned there are two reasons why a letter mailed, say at the corner of King and Yonge Streets, and addressed to say 139 Gladstone Avenue, may not—a very rare occurrence—arrive within thirty hours. One is that the clerk who makes the primary sorting may get the letter into the wrong separation, so that it falls into the hands of a carrier in some other part of the city altogether. This makes it necessary for the carrier to detect the error, the said error being charged up to the sorting clerk. But the carrier himself may miss it and into the wrong bag it goes, and out to the wrong beat, whereat it must be carried back again and the same process gone through with once more.

The other reason is that letters are often imperfectly addressed. For instance, a letter may be addressed, "Mr. Jas. Jones, Queen St." On Queen Street there are more than a score of carriers, each of whom may have a turn at trying to find the proper destination of that letter. Or the number may be written illegibly; or the name of the street is scrawled; or the name is a blur of ink. With all these obstacles the sorting clerk has to contend. He may be a poor writer himself, but he swears he can beat that. Where was the writer of this one brought up anyway? This one must have been taught to write with his toes. Such and many more may be the musings of these experts in handwriting, who hour by hour every day depend for their livelihood on their ability to read other people's writing at sight.

The city delivery sorting clerk's goal is a large cabinet in an open place. Each of the 160 compartments in this cabinet is numbered, and each number corresponds to a beat, or as they say in the postoffice a "walk." No. 19 for instance may be the north side of King St., between Blank St. and Blank Ave.—one postman's walk. The postie who belongs to that walk may have to make four deliveries a day, though the down-town carriers make six. Between deliveries he busies himself taking the letters from the cabinet marked 19, and conveying them to his own little branch postoffice somewhere in the big conglomeration of pigeonholes that occupy the rear half of the office. The rest of the time he is busy with his final distribution. He arranges all his street-

numbers in order of rotation. Each number on his walk has a separate pigeon-hole. So that by the time he has his delivery sorted into the pigeon-holes he is ready to slide them all into his mail bag and start out.

From one source come the letters mailed in the city for city delivery. These are stamped at the machine in front of the office. From another source come the mail train deliveries. Of these the North Shore budget is the most important in an afternoon's work. These come from as far west as Vancouver and from as far east as North Bay, half a carload of mail bags each containing bundles of letters and each bundle hailing from a certain railway postoffice. Each bundle is backed with a slip containing the initials and certificate of the mail clerk at that point. All these letters are stamped and passed on for primary and secondary sorting among the rows of carrier pigeon-holes for city delivery.

Outgoing mails are divided into foreign, United States and Canadian. For each of these there is a separate compartment of cabinets. Canadian mails are divided into as many compartments as there are separate mail routes on the railways served from Toronto. For instance one compartment is devoted to the cities and towns and villages lying along the main line of the Grand Trunk, and each cabinet is labelled with the name of its "R.P.O." Into the Peterboro cabinet for instance go all the mails for Peterboro, as well as the mail letters for "Peterboro forward," including the offices served from Peterboro as a distributing point. This means two packets of mail for Peterboro in one railway mail bag.

As much of the sorting is done in the distributing office as possible. For instance bundles of letters come in address-made-up for a single town in Ontario, and the bundle may come from Chicago or Winnipeg. These are handled at the redistributing point with the greatest speed. From Toronto again bundles of letters are sorted and done up for each of various towns along some side line of railway served from such a redistributing point as Peterboro.

The biggest example of this partial final distribution is the sorting of the Montreal mail. For this there is a separate compartment, and here at any time during the afternoon may be seen a busy clerk shoving letters into pigeon-holes. There are 116 pigeon-holes, each corresponding to a Montreal letter-carrier's route. The clerk is from Montreal. If he were not he might as well be a blind man. He gets a heap of letters all primarily sorted for Montreal. These he picks out knowing by their street and number into which walk they should go. In case of a mere name and a street without the number he must know at what part of the street the recipient of the letter lives. In case of a general address "Montreal" he must know in what part of the town the addressee is located. In the case of unknown people simply addressed "Montreal" he rams them into general delivery. He is a walking encyclopedia of the streets and numbers of Montreal, and his business is to make the primary sorting in the Toronto office for the letter carriers in Montreal. This saves from three to four hours at the other end, and ensures that a letter leaving the Toronto postoffice for Montreal at 8.30 p.m. for the ten o'clock train will be delivered the first thing next morning in Montreal. In the Montreal office there is a similar clerk sorting out the mails for Toronto.

The foreign mail compartment is one of the most interesting. Here Mr. Gorman in charge has his eye every day on all the countries of the world, indicated by various bags labelled geographically. He must know the date of every mail-carrying steamship leaving either American coast, and practically every country civilized enough to have a coast line and a mailing system. The foreign mails have increas-

ed rapidly, particularly the English mail, owing to the number of immigrants that arrived last year in Toronto.

In June 1904 foreign letters mailed at Toronto totalled 2,864 lbs.; newspapers and other matter, 15,192 lbs. In June 1905 the figures were respectively 4,106 lbs. and 24,375 lbs. In December 1904 the figures were 5,822 lbs. and 30,493 lbs. respectively. In December 1905 the aggregate rose to 7,687 lbs. and 37,986 lbs. These increases alone are significant as showing the extent to which Canada is growing as a trade power among foreign countries.

The Post Office on Wheels.

The other busy end of the machine is the mail train. This is less pretentious, but quite as swift. Take for instance the Toronto-Montreal express leaving Toronto at ten o'clock. This train carries mails designated for almost everywhere under the sun reachable in that direction. It is, in fact, a miniature postoffice with the western end of the world cut out of it. Five clerks do the business. Two of these are Toronto clerks, who go as far as Napanee and return.

The chief business begins early in the afternoon at Station A, sorting out second, third and fourth class matter with some first-class slipped in at the station boxes. This is enough to keep the staff busy till train time. After that the work becomes, if anything, swifter than ever. Every route has a separate mail bag, and every bag contains its quota of bundles. The main work is to sort out of one route's make-up the distribution for the various towns along the route. From the "Peterboro" forward" bundle, for instance, a whole series of sub-distributions must be made for railway postoffices radiating from Peterboro', so that each bundle may be cast off along the side-line some time the next day and taken intact right to the postoffice. This must be done with every route bundle—an amount of hurry-up routine impossible to go through with in the general office.

Then at each station a bundle is thrown off and another taken on. The bundles taken on make the heavy end of the work. A bag taken on at Peterboro' for instance may contain matter partly sorted, some intended for redistribution at some eastern distributing centre, and some for various towns and villages between that and the next centre. This is where the hustle comes in—to get the said bundle distributed into its proper bag by the time it gets to that particular station. For as the railroad time-table is the regulating and driving motive in the general office, so is it again in this postoffice on wheels. With a smaller staff the railway mail clerks on the train move just about as fast as it is possible for men to move and read a thousand kinds of writing by a flickering dodging light.

If all the mail were intended for Montreal and no mailbags to take on between, the job would be easy. But year by year as the towns grow and multiply, and the R. P. O.'s get more numerous, and the little offices multiply round the R. P. O.'s, the mail clerk's brain becomes more and more a memorizing machine, carrying the living picture of a hundred cities, towns and villages, each on its own line of railway, its stage route, its route by boat, or mayhap by horseback or dog-train somewhere.

And so from east to west 4,000 miles, and from north to south as far as people and cities and trading posts and even camps extend, the postal service of Canada works as a vast intelligence machine based on human brains and fidelity. Year by year the machine becomes vaster and more complex. Year by year the men who are its wheels and cogs go through their examinations and get their records turned up, with every error inevitably charged back to the right man and credited to the clerk discovering it. And this is the outline story of the biggest single machine that civilization is able to evolve—the great postal system of Canada.

AMONG THE INDUSTRIES

The Porto Rico Lumber Co. are building an up-to-date sash and door factory in Moose Jaw.

Rumors are rife to the effect that the Cramp Steel Works at Collingwood will shortly be put into commission again.

Messrs. D. J. Dyson, Thomas Lock and others, of Winnipeg, are forming a \$50,000 company for the manufacture of pure spirit vinegar in bond.

The Massey-Harris Co. is erecting a large warehouse at Brandon, Man., to be used as one of their chief distributing points for the province.

Williams, Limited, boot and shoe manufacturers of Galt, are removing to Brampton, where it is understood they have manufacturing interests with which they will merge.

R. E. T. Pringle, & Co., Ltd., of Montreal, have taken out a permit for the erection of a large electrical goods factory on Delisle St., St. Henri, to cost \$30,000.

A joint stock company is being formed at Lansdowne, Ont., to erect a large harness factory. The principal directors are H. S. Merrill, Edson Keating and J. D. E. Sheppard.

Fredericton, N.B., is to have a new carriage factory. It will be a three-story building, including woodworking plant and blacksmith shop. Mr. E. A. Morgan will be in charge.

The British American Sign Co. have recently established themselves at 42 Adelaide St. West, Toronto. They will make a specialty of electric signs, embracing all the latest devices.

A factory for making fencing is in sight for Portage la Prairie. It will be built and operated by the London Fence, Limited, who have already picked out a location. Mr. A. E. Blashill is the managing director.

Foley, Lock and Larsen's biscuit and candy factory in Winnipeg has at last been completed, and manufacturing will be commenced at once. It is said to be one of the most complete plants of its kind on the continent.

The Northern Navigation Company have decided to improve their facilities for handling grain, and to that end have leased the Point Edward elevator for a term of years. The elevator in question has a capacity of half a million bushels.

A site has been purchased in North Bay by the T. and N. O. Railway Commission for the new depot to be erected there in the spring. The ground is at present occupied by a number of dwellings, which will be removed as soon as weather conditions permit.

The Brandon Brewing Co., whose plant was destroyed by fire in December last, have announced their intention of building on a much larger scale in the spring. The new structure will be of brick and steel, five stories high, and will cost in the neighborhood of \$75,000.

The Seaman, Kent Co., Ltd., of Toronto, are negotiating with the Town of Port Arthur for a free site for a branch factory which they propose erecting in that vicinity. They will engage in the manufacture of hardwood specialties, such as flooring and shutters, for the western trade.

There is a rumor to the effect that the Canadian Pacific Railway will build to Cobalt during the coming summer. They will approach the district from the East, by extending the line which now runs from Mattawa on the Quebec side.

The Canadian Pacific Railway has placed an order with the new Dominion Steel Car Co., of Montreal, for the construction of 500 steel drop bottom gondolas, to be used on the Crow's Nest Pass section. These will be the first steel cars ever built in Canada.

Mr. R. C. Wilkins, of Montreal, is building a new factory near the corner of Dowd and Bleury Streets. It will be of white brick, 85x52 ft., and four stories high. The entire building, which will be ready for occupancy by May 1st, will be used for the manufacture of "Rooster" brand overalls.

Work has been commenced in Vancouver on the new abattoir which Messrs. P. Burns & Co. are to build there. Mr. Burns has recently visited the most important packing establishments of the United States, and many new ideas will be utilized in the structure.

Waterloo ratepayers will soon be asked to vote upon a by-law to give \$8,000 to Mr. George Moore, who proposes to revive the old woollen mills that have been closed down for some years past. Mr. Moore undertakes to employ from 60 to 75 hands.

It is reported that the Penman Manufacturing Company of Paris will establish a branch at Brantford for the manufacture of some of their special lines. Their present quarters are altogether too small, but it is thought inadvisable to enlarge them on account of the difficulty of securing houses for their workmen in Paris.

The tariff and the dumping regulations will probably be responsible for still another United States concern starting up on this side of the border. This time it is the Mott Fire Engine Company, of Minneapolis. They are in correspondence with the authorities in a number of places with a view of securing favorable terms.

The Clinton Knitting Co. has recently been turned into a joint stock company, with Mr. Samuel Owen as President, and Mr. W. P. Spalding as Manager. In January they moved into their new factory, a building of solid concrete construction, 90x45 ft., thoroughly modern in every respect, and equipped with the most up-to-date appliances.

The Western Counties Power Company have purchased the entire assets and plant of the Brantford Electric and Operating Co., including the street lighting franchise, which has three years to run. The new company obtains its current from the Cataract Power Co., of Hamilton. Mr. John Knox, Hamilton, is Managing Director.

A company of Cobalt mine owners, including Messrs. Trethewey, McMartin and Timmons, have decided to build a large refinery in Hamilton. The industry promises to become one of great importance, and Hamiltonians are congratulating themselves on having secured it for the Ambitious City.

An organization meeting of the Felt Roofing Company, of Brantford, was held on February 8th, when officers were elected and a plan of operations decided upon. The contract for the factory building has been let to Messrs. Schultz Bros. & Co. Mr. W. D. Schultz is President of the company.

An agreement has been reached between the Port Arthur Town Council and a number of Boston capitalists for the erection of a large steel tube works. The town is to give the company a 100 acre water lot for a site, and to take \$100,000 of their bonds at par. The plant will cost \$750,000, and will give employment at the start to 250 men.

The depredations of the dog fish in Maritime waters have grown to such an alarming extent that it is understood the Government will establish a number of reduction works at various points in the spring. It is reported that one will be located at Main à Dieu, C.B.

The Moyie Lumber and Milling Co. interests at Moyie, B.C., have been purchased by Mr. J. D. McArthur, of Winnipeg. For the past two years the plant has been idle, but it is understood Mr. McArthur intends spending about \$100,000 in mill and stream improvements with the expectation of resuming operations in the immediate future.

The Montreal Street Railway will spend nearly \$2,000,000 on improvements and extensions during the coming year. They will build an immense new power house in the east end, upon which work will be commenced in the spring, and will extend the system in various directions outside the city. For the latter work an order has been placed for 6,000 tons of T rails, 86½ lbs., all for May delivery.

If the plans of the Hamilton and Caledonia Railway Co. carry through, Hamilton will shortly be supplied with natural gas. The company has secured the right to lay gas-pipes alongside of the projected railway, and propose to deliver one million feet of gas per day to the city. It is reported that they have already contracted with the Hamilton Steel and Iron Company for a large portion of that amount.

Mr. Alex. Morrison, of Bay City, patentee of a process for manufacturing binder twine from flax, is endeavoring to promote a company that will manufacture under his patents in Canada. It is claimed that by his process a very superior twine can be made at a cost which will enable the product to be sold for less money than the ordinary variety. Sarnia, Chatham and Glencoe are all making a bid for the industry.

About the end of January the new mills of the Alberta Milling Co. at Edmonton were put in operation, and are now turning out flour at the rate of 300 barrels per day. The elevators in connection with the plant have a capacity of 125,000 bushels. The company, which was formed in June last, has a capital of \$100,000. Mr. D. R. Fraser, the well known lumberman, is President.

The final returns of the salmon canning industries in British Columbia show that last season's pack reached a total of 1,167,460 cases. This is slightly less than the pack in 1901, the year of the last big run, but more than in 1897. Next year's business is expected to be rather poor, owing to the fact that in 1902 the Fraser River hatcheries did not do very well.

A despatch from Nanaimo, B. C., states that the extensive stone quarries, owned by the Western Fuel Company on Newcastle Island, were re-opened on Feb. 8th, under the management of the Northwest Construction Company. The company has secured several large orders ahead, which will keep the quarry in steady operation for many months. About 25 men are employed.

Vancouver gives promise of becoming a grain exporting centre of no mean importance. An elevator of 100,000 bush. capacity is now being built at that point by the Hall Elevator and Grain Co., and another one of equal size is being promoted by Mr. John Lineham, of Calgary. The growing trade with the Orient is assigned as a reason for this development.

Despite the rather poor outlook for the salmon canning industry next season, a new plant will be built at once by a number of Vancouver men at Steveston. About \$20,000 will be expended on building and equipment, and everything

will be in readiness for the first run next July. A capacity of 1,500 cases per day is aimed at. Mr. R. V. Winch, of Vancouver, is one of the principal stockholders in the new enterprise.

The shareholders of the Canada Starch Company, Limited, met in Montreal on Feb. 2nd, to complete their organization, when the following officers were elected: President and Managing Director, Mr. Geo. F. Benson; 1st Vice-President, Mr. Wm. Strachan; 2nd Vice-President, Mr. Lloyd Harris; Secretary-Treasurer, Mr. Joseph Ruddy. The new concern is an amalgamation of the Edwardsburg Starch Co., of Cardinal, the Brantford Starch Works and the Imperial Starch Co. of Prescott.

The Mowry Safety Nut Co., of St. John, N. B., have secured from the City Council a lease of a number of valuable water lots on Courtenay Bay. The intention is to redeem a large portion of the land which is at present flooded during high tide, and should the experiment prove successful other industries will be attracted to the same quarter. The Mowry people agree to expend \$150,000 within five years in permanent improvements and to pay out \$50,000 a year in wages.

Busy Berlin gives promise of becoming still busier. Three new factories are in prospect. One, a button factory, will give employment to 50 men at the start. It is being financed by Messrs. Geo. Schlee, D. B. Detwiler, and M. B. Shantz. Mr. J. Trussler, of Parry Sound, will build a plant for the manufacture of cement brick on an extensive scale. Some local men are also interested in a project to manufacture sand-paper and sand belting, and have been investigating the methods employed in United States centres.

The concrete foundations of the Atikokan Iron Company's blast furnaces at Port Arthur have been completed, and the brick work is now being commenced, with a force of 75 bricklayers. Contracts for the structural steel and machinery have been let as follows: \$200,000 to the Canada Foundry Co., \$100,000 to the Canada Bridge Company, \$20,000 to the Caledonia Iron Works. Other contracts went to United States firms, and were for machinery not made in Canada. It is expected that everything will be in readiness for the first blast next August.

According to Mr. C. D. Warren, President of the Lake Superior Corporation, plans are under way for the immediate construction of two new open hearth furnaces at the Sault, which will increase the capacity of the steel plant 25 per cent. It is expected that they will be completed and in operation by August 1st next. At present there are two blast furnaces and a steel convertor. The new furnaces will cost at least \$250,000. The erection of coke ovens, and the vigorous prosecution of work on the Algoma Central and Manitoulin and North Shore lines will be other features of the year's programme.

Letters of incorporation have been taken out by the Canadian Electrical Process Co., Ltd, of Halifax, for the purpose of erecting and operating an electrical tannery at some convenient point in the Maritime Provinces. The progress of the venture will be watched with interest. Those behind it are convinced of the feasibility of their plans, and claim to have given the process a very severe trial. A demonstration plant has been in operation in Halifax for the past three months, the tests showing that the electrical tanning process can do in 30 days what it takes four months to do by the process now in use. The quality of leather produced is said to have been of the finest.

AMONG THE BOARDS OF TRADE.

St. Catharines.

The construction of a high-level bridge across the canal to tap the country to the south and west has for some time been a live local topic. At present the wide detour and long hills are an impediment to communication with the railway and the territory on that side of the canal, with the result that valuable trade is being lost. Strong pressure has been brought to bear upon the Council to undertake the work as a municipal enterprise, and it is probable that a by-law will be submitted to the ratepayers in the near future.

Winnipeg.

The annual meeting of the Winnipeg Board of Trade was held on February 6th. The address of the retiring President, Mr. A. L. Johnson, was one of the most masterly reviews of the business situation the members ever listened to.

A lengthy report was presented by the committee appointed to examine Prof. Mavor's Blue Book on the wheat-growing possibilities of the West, which went to show that its normal capacity had been absurdly under-estimated.

It was decided that the board should co-operate with the Provincial Government in collecting and compiling statistical information relative to the resources of the country with a view especially of setting forth the advantages to manufacturers of locating in Winnipeg.

Montreal.

Mr. W. I. Gear, the retiring President, in addressing the board at its annual meeting, expressed himself as being personally in favor of a policy of Free Trade within the Empire. That portion of his speech dealing with this subject was as follows:—

"A preferential tariff with Great Britain, I think, is almost unobtainable, notwithstanding all that has been said, as you are demanding something from the British consumer that he cannot see his way to grant, because there is a depth to it he cannot fathom, and no amount of teaching will make him believe that he does not pay the duty. I, however, accept the preferential trade problem, if it can be secured, as a good thing for Canada, as a stepping-stone to something better, and so have worked for it. But if you were to go to a British consumer, and say to him: 'Put on a tariff against all foreign countries, and in consideration of your doing so the colonies will go in for free trade with the Empire,' you would be two men making an arrangement on equal terms, and I believe that if an English statesman would come out with that policy he would carry the country, and it would then be up to the colonies to accept or refuse a business proposition. I know that the policy will be looked upon by many, if not all of you, as an unlikely one. I can almost imagine manufacturers spelling ruin at once; but would it, with our immense resources awaiting to be developed from ocean to ocean? I think not. The economics of trade would in time adjust themselves.

"As an example, take our inter-provincial trade. If one Province had a duty against another, business would be restricted, but by having free intercourse between Province and Province, Canada during the past few years has been advancing in unprecedented bounds in wealth and in importance.

"Now, if the same conditions are applied to the British Empire with free intercourse between all the component parts of the Empire, why should you not build up an Empire immensely greater and vaster than what it is to-day, or ever dreamed of, and in building up this great Empire Canada would be the chief star of the crown. The fight, I will admit,

would be hard, but it would not only have to be won by our resources, but by the education of our people."

Vancouver and Victoria.

Cheaper freight rates into the Yukon via the White Pass Railway is one of the urgent matters now receiving the attention of the Boards of Trade in these cities. They have also asked the Dominion Government to institute measures for the safe-guarding of life and shipping on the west coast of Vancouver Island. An invitation has been extended to Prof. McLennan, of Toronto University, to deliver his lecture on the Metric System in Vancouver and Victoria.

British Columbia Interior Boards.

The Associated Boards of Eastern British Columbia met in Annual Convention at Cranbrook on January 31st. Approval was expressed of the Dominion Fruit Marks Act, which will prevent the importation of diseased fruits from Washington and elsewhere and the exportation of bad fruit. Strong exception was taken to the bill before the British Columbia Legislature, prohibiting the export of unmanufactured timber from the province. It is said that millions of ties and mining props go into the prairies yearly, and that the passing of this bill would close down hundreds of lumber camps and cause much distress.

Other resolutions were passed asking for a duty of 30 per cent. on spelter and zinc sheets, the preservation of forests from fire, geological surveys of mineral camps in West Kootenay, the immediate construction of a branch of the C.P.R. between Gerard and Arrowhead, the appointment of additional fruit inspectors, the re-establishment of claims at noon instead of at midnight, survey of lands for attracting immigration and setting aside one-eighth of all public lands for public and technical school purposes.

Amherst.

A proposal is under consideration for the transmission of electric power from Maccan, to be used in industrial plants in the city. A right of way has been secured through the intervening nine miles of territory, and an electrical engineer has been appointed to work out details and to report to the Board of Trade.

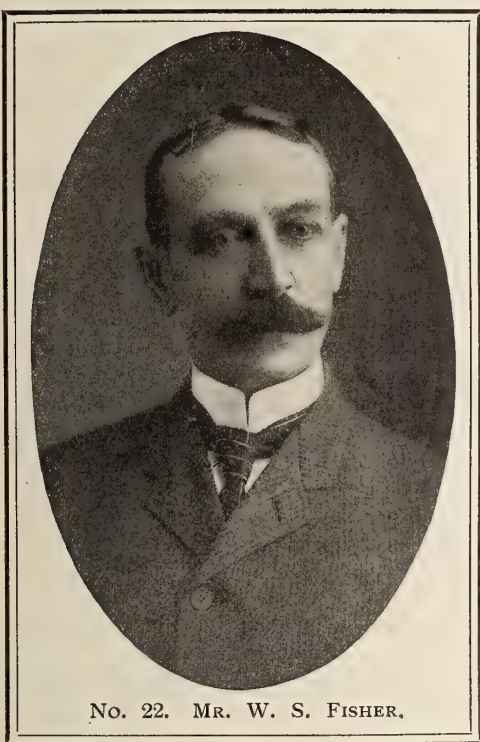
Toronto.

"The merging of the Technical School into the general school system of the city has not been productive of the beneficial result anticipated, but, on the contrary, seems to have brought the curriculum nearer to the ordinary high school standard," said Mr. J. D. Allan, the retiring President, at the annual meeting of the Toronto Board of Trade on February 9th. "The hope of this Board of Trade, when urging the enlargement of its scope, was that science and commerce would be brought more in touch with each other through the training the school would give. The commercial department seems to have done good work along the lines advocated by this board, but in the industrial and scientific departments there has not been a sufficiently well-defined specialization in the curriculum to produce notable results. This cannot be attributed to any lack of ability or earnestness on the part of the staff, but rather to an absence of any intimation of what line of instruction would best suit local needs.

"There is apparently no prospect of placing this school in possession of an equipment necessary to do the work undertaken by such institutions in other countries, and it becomes a question whether the importance of the work does not justify the claim that such schools should receive federal as well as provincial aid."

THE MANUFACTURERS OF CANADA.

William Shives Fisher, manufacturer and wholesaler, was born in Fredericton, N.B., in 1854. At an early age he removed with his family to St. John, at whose local institutions he laid the foundations of a broad and liberal education. On leaving school he articulated himself to the hardware and foundry trade, serving an apprenticeship of eight years before starting in business on his own account. His first venture was as a partner in the firm which still bears his name, that of Emerson & Fisher, of St. John, manufacturers of hardware, and wholesale and retail dealers in hardware supplies. From small beginnings he has had the satisfaction of watching this business expand into one of very large proportions. Last year on the occasion of their removal to handsome new quarters built expressly for them, the firm was turned into a joint stock company, under the title of Emerson & Fisher, Limited, of which Mr. Fisher is Vice-President and Secretary. He is also President of the



No. 22. MR. W. S. FISHER.

Enterprise Foundry Co., of Sackville, N.B., manufacturers of a line of stoves that are well known all through the East and as far West as Ontario.

As a public-spirited citizen, whose time has been unselfishly devoted to the furtherance of worthy objects, Mr. Fisher has few equals in the Maritime Provinces. For several years he was President of the St. John Board of Trade, and is still a member of the council of that body, taking a most active interest in all public movements. He is Vice-President of the St. John Hardware Association, Vice-President of the Maritime Board of Trade, embracing New Brunswick, Nova Scotia, and Prince Edward Island, and Vice-President for New Brunswick of the Canadian Manufacturers' Association. He was the originator and President for some years of the New Brunswick Tourist Association, the first organization of its kind in Canada. Mr. Fisher has been, and is still, connected with many local boards, among the offices he has held being the Presidency of the Board of Associated Charities, and the Presidency of the Y. M.C.A. He has been urged a number of times to accept

nomination in the Conservative interest for the Dominion and Provincial Parliaments, an honor he has been forced to decline owing to pressure of business duties.

Mr. Fisher is a man of strong personal characteristics. Genial in disposition, polished in both speech and manner, possessed of a quiet vein of humor and hospitable to a degree, he has all the necessary qualifications to win and retain the friendship of the people with whom he comes in daily contact. He is an indefatigable worker; to the conduct of both public and private affairs he applies himself with great energy. Throughout the Maritime Provinces he is noted as a man of broad views and of strongly patriotic Canadian sentiment; and no voice more effective than his is ever raised in support of such themes as the adequate protection of Canadian industries, Canadian ports for Canadian trade, or the admission of Newfoundland and the British West Indies into Confederation.

JUST ABOUT OURSELVES.

The present issue marks the commencement of a new career for INDUSTRIAL CANADA.

INDUSTRIAL CANADA has steadily endeavored to serve the purpose for which it was established, viz., to keep the widely distributed members of the Canadian Manufacturers' Association in close touch with the work of their different committees and branches, but in so doing it has naturally developed a number of features which could not possibly appeal to the man outside the Association. And yet, the value and importance of the special articles which have from time to time appeared in its columns has made it a matter of regret that the paper was not more widely read.

To overcome this difficulty, without interfering with the status of INDUSTRIAL CANADA as an official organ, only one way seemed open. That way has been adopted, and the current number may be taken as a fair indication of the style in which the paper will appear from now on. By publishing the Association news in the form of a supplement to be sent only to members and by the insertion every month of a number of high class articles by well-known writers, dealing with subjects of interest to business men, it is believed that INDUSTRIAL CANADA can be made to fill a long felt want in the field of Canadian journalism. It is with the proud hope that it will shortly be recognized as a standard publication on industrial problems, as a national magazine whose influence is ever lent to the up-building of a strong Canadian sentiment, that it now bespeaks the co-operation and support of the business men of the Dominion.

It is impossible at present to make any lengthy announcement regarding our future programme, as our plans have scarcely had time to take definite shape. Arrangements have already been made, however, for a number of valuable articles to appear in succeeding issues, including a continuation of the series on "Economy in Manufacturing" by Mr. H. L. Hall, whose introductory article in February has called forth much favorable comment; "The Chemical Industries of British Columbia" by Dr. W. R. Lang of Toronto University; a paper on "Smoke Consumption" by Mr. M. C. Huyette; more talks on "Advertising" by Mr. MacDonald; "Welfare Work Among Factory Employees," by Mr. S. J. Williams, of Berlin; "A National Canadian Policy," by Honorable James MacMullen; besides articles on the Cobalt and Lake St. John Districts, and a number of popular sketches descriptive of the processes of manufacture employed in various industries. Timely articles on matters of current interest in the fields of transportation and insurance will be contributed by experts in those departments. More atten-

tion will be paid to reporting items of industrial expansion and trade opportunities abroad, with a view to encouraging the sale of Canadian goods. Other features, such as the biographical sketches of prominent manufacturers, book reviews, correspondence, and scientific notes will be continued, and so far as possible made more interesting.

While we earnestly desire to please and to instruct, we realize that we can never hope for success without the co-operation of our readers. Friendly criticism and suggestion are, therefore, invited, and where practicable will be acted upon. In the meantime we crave indulgence for the shortcomings which cannot fail to mark the beginning of our career as a magazine, assuring our readers that it will be our constant effort to merit a continuance of the support so freely given in the past.

HAMILTON'S UNION LABEL CASE.

The Mayor and Aldermen of the City of Hamilton were last month called upon to defend themselves on a charge of conspiracy in connection with the awarding of certain civic contracts. Some years ago a resolution was adopted by the Council to the effect that all clothing purchased for policemen and firemen should bear the union label, and no tenders have since been considered which did not comply with this specification. Last year it was decided that all painting at the City Hall should be performed by union labor, and in a certain contract for sewer construction a stipulation was made that the contractor should employ none but union workmen at current rates of wages.

The information laid charged *inter alia* that the defendants in the years 1904 and 1905 did, contrary to law, conspire, combine, agree and arrange, the one with the other or others of them, and with divers other persons, firms and companies and corporations, then unknown, to unduly limit the facilities for producing, manufacturing, supplying and dealing in clothing, building materials and other commodities which might be the subject of trade and commerce.

The main argument advanced by the counsel for the defence was that this was not a case of conspiracy in that it applied to buyers, not to sellers. There was no attempt to enhance prices or restrict production. The Council had simply done what any individual or company had the right to do—they had bought from the firm of their own selection. Evidently this was the view of the magistrate before whom the argument was heard, who pointed out that each member might have decided before the meeting that he would give the work to such and such a firm; it was a case of natural selection, and surely a man could choose as he pleased.

The counsel for the prosecution replied that whereas one man might do as he pleased, three men doing the same thing would lay themselves open to a charge of conspiracy under certain circumstances. There could not be a purchaser without a seller, and if the purchaser and seller both conspired, both were guilty. Everyone knew why the Council had limited competition as they had, and the question to be decided was whether the Act was broad enough to bring such dealings within its scope.

The case was dismissed by the Magistrate on February 19th, on the ground that no sufficient clause had been made out in the indictment to put the accused upon their trial. There were other clauses in addition to the one quoted, but these were held to be objectionable as not being properly laid to cover any statutory charge.

It would seem, therefore, that the Hamilton aldermen escaped commitment only through lack of sufficient evidence. Technically, the Magistrate was probably right, yet

there can be no room for question that in the spirit of the law the defendants were guilty—guilty of conspiracy and guilty of a gross breach of trust. Their duty under the Municipal Act was plainly to throw all tenders open to the freest competition; in limiting it as they did they trespassed on the rights of individual citizens. Every ratepayer should be entitled to equal consideration in tendering for civic contracts, and it would be in order for those who have been subjected to undue prejudice to enter a civil action against the Council for the purpose of having the union label resolution quashed.

FREE INDUSTRIAL ALCOHOL.

A Boon to Farmers, Manufacturers and Transportation Companies.

Strong influences are being brought to bear at Washington to secure legislation that will permit the use of denaturalized alcohol for industrial purposes free of tax. At a recent meeting of the Ways and Means Committee a number of prominent manufacturers were present to give their views on the subject, and from the report as published in *The Iron Age* they were able to make out a very strong case indeed. The Canadian excise and customs tariff are such as to make this question one of considerable importance to the manufacturers of this country. The following extracts from the statements submitted by United States manufacturers should, therefore, be read with interest.

Mr. F. F. Ingram, representing Detroit manufacturers of gas engines, said in part:

"Removing the tax from alcohol when its use is restricted to industrial purposes by making it undrinkable has been a great boon to the German manufacturer, enabling him to successfully compete in otherwise inaccessible markets. It has also brought vast tracts of abandoned barren farm lands to unprecedented prosperity because these depleted, light, sandy soils, unfit for cereals, now produce great crops of potatoes that find a ready market as alcohol producers, the distillers fattening cattle on the refuse left after distillation, thus greatly increasing the wealth and prosperity of the country, and furnishing their industries and war department at the same time a cheaper and inexhaustible source of supply for heat, light and power. Their chemical manufacturers are also liable to undersell ours in our own markets in spite of tariff restrictions because they use untaxed alcohol, the universal solvent, on which the American must pay a tax of 1,000 per cent. The other chemical nations, excepting the United States, have followed Germany's example in freeing from tax alcohol used for industrial purposes.

"Its economical use for heat, light and power is as unlimited as is the supply. Its free use would benefit the farmer by creating an output for starchy materials otherwise unmarketable, at the same time reducing the cost of motor power for farm work.

"That the average percentage of gasoline in petroleum from all the oil fields of the world is less than 2 per cent. may account for the steadily advancing price of this fuel for gasoline engines that are now manufactured at the rate of over 100,000 per year, an output that will be much increased if the cost of operating them is reduced as it would be with the cheaper alcohol."

Small Engines for the Farmer.

Mr. James C. Warnes, of the International Harvester Company, discussed the advantages of small internal combustion engines on the farm:

"In our position as builders of a large number of such engines, requiring a fuel which is produced in limited quantities and which is often of an indifferent quality and a constantly increasing price, the question of the future fuel supply becomes one of most vital importance. Already the sale of engines in some sections of the country is rendered more difficult owing to the exorbitant price of gasoline, and yet the introduction on the farm of small explosive engines on an extensive scale has already begun. The agriculturist at the present time recognizes more than ever before the general utility of the small engine on the farm; for example in pumping water, grinding feed, sawing wood, operating churns and cream separators, threshing grain, shredding fodder, etc. With favorable prices on fuel its application can readily be extended to tractors, so that within a short time power-driven grain harvesters, mowers, ploughs, corn harvesters, cultivators, and like implements may replace many of those in present use, and thereby save the cost and keeping of an extra team.

"In view of the constantly increasing demand for gasoline, and because of the adverse effect of its increased cost on domestic sales in engines, and of the difficulty of manufacturers here sharing in the foreign trade, we cannot assume an attitude of indifference with respect to the present question. Furthermore, the fact that a single corporation can play fast and loose with the prices and qualities of petroleum products accentuates the need of fostering a competing fuel, in order to prevent a further increase in price and consequent arrest of development in vast and important industries."

Alcohol vs. Gasoline.

Prof. Elihu Thomson, of the General Electric Company, presented a paper which was followed with great interest. It was, in part, as follows:

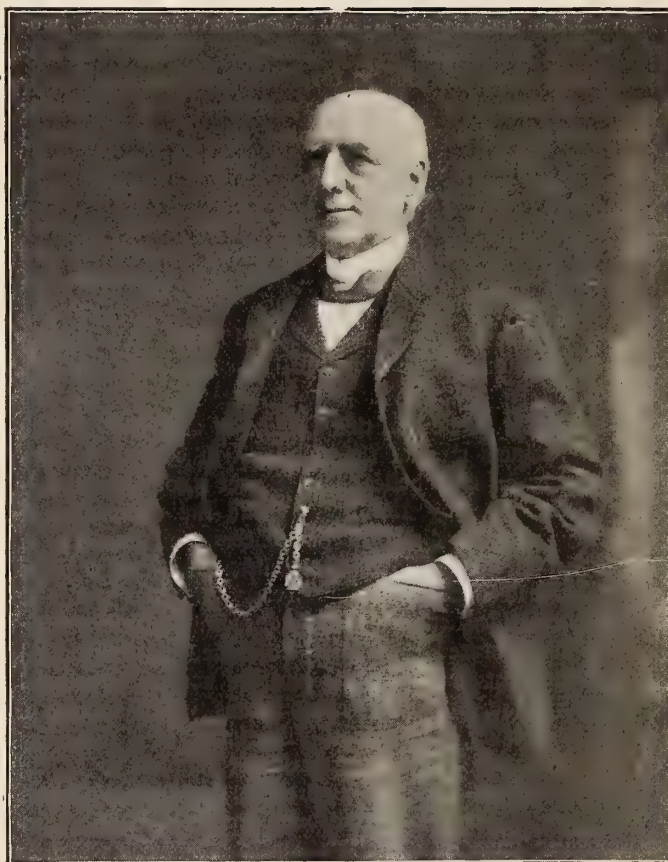
Gasoline as well as kerosene has the great disadvantage that it floats upon water and is distributed by water. It is a well-known fact that it is commercially useless to attempt to extinguish burning gasoline or kerosene by water alone. Not so with alcohol, which mixes with water in all portions, and which is at once diluted and prevented from remaining combustible.

"We have recently tested at the Lynn works of the General Electric Company a Deutz alcohol engine, a type of engine made in Germany especially for use with alcohol, and the results have been such as to prove without doubt the entire suitability of alcohol, if cheap enough, as a fuel for internal combustion engines. This particular engine is to be sent to the Island of Cuba and coupled to a dynamo for lighting. It will be operated with the cheap Cuban alcohol, which is, I am informed, sold there at about 12 to 15 cents per gallon. A few gallons of this alcohol were obtained and used in our tests here, and it was found to be a high-grade spirit, containing 94 per cent. alcohol by volume and 6 per cent. of water, or about 91 per cent. alcohol by weight.

"While it is not methylated or denaturalized, there is no question that the behavior in the engine of denaturalized or methylated spirit would be identically the same as with the pure grain alcohol. To obtain this sample of Cuban alcohol it was necessary that we pay an import tax of \$4 per gallon, with other charges, which made the cost of the material used in testing enormous as compared with its actual value in Cuba, and I may here remark that, as in testing an engine of this kind a considerable quantity of alcohol will be used, manufacturers here in the United States would suffer a considerable disadvantage in building such engines as compared with those in a country where methylated spirit, untaxed, is obtainable. In fact, the cost of the material for testing the engines is probably a sufficiently

strong deterrent just now to prevent the manufacture being taken up in the United States. The Island of Cuba is, however, an excellent field for the use of such machinery, on account of the low cost of alcohol.

"It may be mentioned here that our experiments developed the fact that alcohol is suitable as a motor fuel even when it contains as high a percentage as 15 per cent. of water. Notwithstanding the fact that the heating value of alcohol, or the number of heat units contained, is much less than in gasoline, it is found by actual experiment that a gallon of alcohol will develop substantially the same power in an internal combustion engine as a gallon of gasoline. This is owing to the superior efficiency of operation when alcohol is used. Less of the heat is thrown away in waste gases and in the water jacket. The mixture of



THE LATE MR. E. B. EDDY

Born at Bristol, Vermont, August 22nd, 1827
Died at Hull, Quebec, February 10th, 1906

alcohol vapor with air stands a much higher compression than does a mixture of gasoline and air without premature explosion, and this is one of the main factors in giving a greater efficiency.

"There is just now the beginning of a large development in the application of the internal combustion engine to the propulsion of railroad cars on short lines as feeders to the main lines. In this case an ordinary passenger car is equipped with a power compartment at one end, in which there will be installed an engine of, say, 200 horse-power of the internal combustion or explosion type. The growth of such a system is liable to be hampered in the near future by the cost of gasoline as a fuel, and the difficulties of using kerosene are still quite considerable. Especially is the exhaust likely to be offensive. In this case alcohol, which could be produced in unlimited amount, could be substituted.

BUSINESS BOOKS FOR BUSY MEN.

The Newfoundland Guide Book, 1905, including Labrador and St. Pierre. Illustrated. Edited by Judge D. W. Prowse, Bradbury, Agnew & Co., London, pp. 182.

As the editor states this small volume was prepared at the request of the Newfoundland Government to give a reliable account of the colony and its prospects. Newfoundland's great fisheries have blinded people to the interior wealth, which until quite recent years has lain unprospected and largely unsuspected. The editor prophesies great coal mines will be opened before long, and iron, copper and other metals will be extensively worked. Lumbering is being carried on more extensively than ever. Like Canada, the island colony, the oldest among British colonies, has much more sunshine than England. June to October are the warm months, though the cold is not so severe as in the mainland. The population totals 224,931, St. Johns having 40,000; two-thirds of the population are Protestants. Other than upwards of 200 saw-mills and 10 furniture factories, the manufacturing establishments are unimportant. The far-seeing editor is an ardent advocate of union with Canada, though he confesses he has to look away from conditions of early promise to the island and meet with a fair share of local prejudice and apathy. Canada is big enough surely to offer satisfactory terms, and thus round off as far as possible the British possessions in this northern part of a continent that is so rapidly expanding.

Directory of Directors in Canada. Edited by W. R. Houston, Houston's Standard Publications, Toronto, 1905, pp. 300, \$3.00.

As the name indicates, this volume is an index of the prominent business men of the country. It consists of two Parts: Part I., an alphabetical list of over 5,000 names, followed in each case by the address and the companies of which they may be directors or officers, and Part II., a classified list of incorporated companies, giving chief place of business, their directors and officers. In other words it presents in classified, though abridged, form the information regarding incorporated companies contained in the annual report of the Secretary of State and the various Provincial Secretaries. Like all other compilations which involve a selection, it is open to criticism. The value of a directory is largely measured by the information it supplies regarding men and companies of minor importance, and judged by this test the book will frequently be found wanting. Due allowance, however, must be made in the case of a work which is the first of its kind in Canada. As an index to our captains of industry and finance it supplies a long felt want, and it is to be hoped the editor will receive such encouragement as to warrant him in making the publication an annual one.

Mitchell's Self-Testing Safety Code. By Charles Judge Mitchell. The Mitchell Self-Testing Safety Code Co., Toronto, 1905.

Those who have given some thought to the telegraph bill problem, who have endeavored to obtain relief by the use of codes, and who have finally been obliged to give it up in disgust, will be delighted to find in this latest addition to the already long list of codes, the only practical and scientific solution to their difficulties. The whole system is so economical, so beautifully simple, so common-sense like in arrangement, and lends itself so readily to the correction of mistakes made in transmission that the wonder is it was not thought out long ago. The code word in this system is a combination of syllables, each of which may represent a whole phrase, clause, or sentence. They are arranged in groups and

columns according to the nature of the subject dealt with, and permit of almost as many shades of meaning as there are combinations and permutations of the letters involved. The needs of every business seem to have been fully anticipated, provision being made for the adoption of private codes should it be found desirable. The condensing power of the system is tremendous, and we are inclined to think the author is too modest when he claims that the user will frequently save 50 per cent. of the ordinary charges. A feature worthy of particular mention is the rapidity with which messages can be codified by it. "Time is money" is just as true when applied to this kind of work as to others.

FOREIGN TRADE NOTES.

More Care Needed in Handling Flour.

Mr. C. M. Kittson, Canadian Commercial Agent in South Africa, reports to the Department of Trade and Commerce, that a recent shipment of Manitoba flour by the steamer Wyandotte arrived in Cape Town in bad condition. The report mentions that the Canadian flour shipped during the winter months always shows a larger percentage of damage than when forwarded during the summer. It is thought that possibly the cause is that the transfer of flour cargo at West St. John from cars to steamers takes place during wet weather, and absorbs moisture, with the result that the flour is liable to sweat while in transit through the tropics.

What the Natives in the Transvaal and Orange River Colony Buy.

The trade with the colored population of the colonies is monopolized by Germany and the United Kingdom. The profits obtained are large, as a great proportion of the 10,000,000 blacks of various tribes living south of the Zambesi are well to do, there being always a demand for native labor. Colored servants earn from 3l. to 4l. 16s. a month, in addition to board and lodging, and other forms of labor are also well paid. Stringent legislation prevents the sale of spirits to the natives, so most of their earnings are devoted to purchases of a varied nature. A certain number of articles are imported exclusively for sale in the kraals. Among these, toilet wares rank first. There is a very great demand for violent perfumes, sold chiefly in flat cardboard boxes, containing twelve assorted bottles; these boxes are sold to Pretoria traders at about 3s. 1½d. apiece. These goods are of German origin, but are despatched from London. Germany also sends celluloid hairpins and combs. Hairbrushes with a small mirror inserted in the back, costing about 4s. 11d. a dozen are in great demand. Fancy pins are used largely by the Kaffir women to fasten their blankets; these are made of gilded copper, with red or green glass heads. They come from the United Kingdom and Germany, and are sold to Pretoria dealers at from 7s. 3½d. to 16s. 8d. a gross. Other articles in demand are small oil lamps, leather purses, briar or imitation briar pipes, mouth organs, accordeons, cheap cutlery, glass beads, and copper wire bracelets.—*French Consul-General, Pretoria.*

The Milan Exposition.

Mention has already been made in these columns of the International Exhibition, which is to be opened at Milan, Italy, on April 15th next. From the U. S. Consular Reports we gather that this will be the first international exhibition ever held in Italy, and therefore likely to attract considerable attention. Milan, besides being the chief commercial centre of the country, is, from its position on the Continent, readily accessible to visitors and buyers from neighboring countries. The Italian tariff, compared with that of some

other countries, may be considered a moderate one, and there is a large number of articles which cannot at present be produced locally, and must therefore be imported. The economic condition of Italy is said to be distinctly encouraging, and there are plenty of good openings for foreign-made goods.

West Indian and Panama Notes.

Mr. G. Eustace Burke, in the course of a newsy letter to the Department of Trade and Commerce, reports that Jamaica's purchases of hams and bacons continue to increase, though Canada seems hardly to share in the increase. He is satisfied that if a serious effort be made to capture a portion of the trade encouraging results would accrue. He states that considerable quantities of "English" hams arriving there from Bristol and Liverpool are of Canadian origin,

facility of entry to the open market than that of other countries. There is no direct steamship communication between Panama and Canadian ports, but it may be pointed out that an initial trade may be done via Jamaica, which is within 36 hours' steam run of Colon."

Flour Market in Japan.

Mr. I. K. Kerr, of Calgary, who recently returned from a four months' trip to a number of the principal points in Japan and China, reports that the flour market in Japan is somewhat glutted, there being quite an amount of flour on hand after the war, which is not being used nearly as rapidly now as during war times. The United States shippers are also unloading largely on the Japanese markets owing to the

THE CANADIAN MANUFACTURERS' ASSOCIATION



MR. R. J. YOUNGE

Who retired from the Secretaryship of the Canadian Manufacturers' Association on March 1st, to accept a position as Sales Manager with the Canadian Rubber Company of Montreal.



MR. J. F. M. STEWART

Formerly Asst.-Secretary, and Secretary of the Toronto Branch, who succeeds Mr. Younge.

THE CHANGE IN THE SECRETARYSHIP

being simply recanvassed and relabelled with the English trader's trade mark.

A small consignment of Canadian wall papers was received in December, and compared very satisfactorily with English and United States grades as regards price and quality, but its length proved a serious drawback to its sale. The standard of length in Jamaica is 12 yards instead of 7 as in this market.

An experimental shipment of sugar was recently made from Demarara to Vancouver, via the Horn, consisting of about 5,000 tons on an outright purchase basis. Heretofore the British Columbia refinery has drawn all its supplies from Java and the Pacific Islands, so that the success of the new venture will be watched with a great deal of interest.

Regarding the Panama market, Mr. Burke holds rather optimistic views. "It hardly seems to be generally known," he writes, "that the United States output enjoys no better

Chinese boycott. Mr. Kerr says the outlook in China is brighter, and would be greatly improved if the Chinese could be made to understand that Canada is in no sense a part of the United States. He found that the United States and North America were practically synonymous terms with the Chinese.

Opportunities in Roumania.

According to a recent report by the United States Consul-General at Bucharest, there is a market in Roumania for manufactured articles of all kinds, especially furniture, sewing machines, motor cars, bicycles, typewriting machines, locks and keys, silverware, boots and shoes, cloth, and hats. The Consul-General thinks that the domination of the Roumanian market by Austria-Hungary and Germany is due not so much to their proximity as to the absence of keen competition.

TRADE ENQUIRIES.

NOTE.—For further information regarding any enquiry mentioned under this heading or the names of enquirers, apply by number to the Secretary, at Toronto.

- 221 **AGENCIES, Chester, England.**—A Chester, England, correspondent asks to be put in touch with Canadian shippers desiring to appoint a representative. He has offices in Liverpool and Worcester, and has been referred to the Association by one of the Canadian Government agents.
- 222 **Paris.** An energetic man (39), well known in the American and Canadian dry goods trade for the last 21 years, as representative of one of the foremost European concerns, seeks position as European agent resident in Paris, France, either for buying or selling purposes. The advertiser enjoys unusual connections in the European markets, speaks and writes fluent English, French, Spanish and sufficient German. Highest references.
- 223 **Roumania.**—A correspondent writes that he is in a position to do considerable business with Canadian products in Roumania and Bulgaria, and invites correspondence.
- 224 **Sydney.**—A gentleman in Sydney, Australia, who has been for some time in the employ of a Canadian company, which company recommends him to this Association, is now going into the manufacturing agency business, and is anxious to procure a few Canadian lines. We are advised that he is a man of first-class character, and well known in New South Wales, Victoria and South Australia, and that his work with his previous employers was in every way satisfactory.
- 225 **Bacon, Hams, Sides, Etc.**—An East Coast, England, firm of produce merchants, making a specialty of bacon, hams, sides, bellies, Cumberland cuts and Wiltshire cuts, at present imported from the United States, desire to get in touch with Canadian exporters of the above goods.
- 226 **Bacon, Hog Products, June Cheese, Flour, Canned Peas.**—An agent in Leicester, England, having a connection with the grocery trade in the Midlands, desires to secure the agency of a Canadian shipper in the above named lines.
- 227 **Barrels.**—A meat packing company in Brussels, Belgium, having an establishment in the Argentine Republic, is contemplating the desirability of erecting an establishment in Canada, and desires to communicate with the manufacturers of white oak meat barrels.
- 228 **Bent Wood for Carriages, Bending Machinery, Malleable Iron Castings for Carriages, and Railway Plant.**—A correspondent in Altona, (Elb), Germany, asks for catalogues and price lists from Canadian firms in a position to supply the above goods.
- 229 **Blocks, Maple.**—A large Yorkshire, England, engineering firm desire to get in direct communication with Canadian exporters of maple blocks for June delivery, to be used in clothes wringers, usual size 22 inches to 26 inches long x 5 3-4 inches to 6 1-2 inches, and are desirous of giving full particulars, prices, etc., to intending shippers.
- 230 **Boxes, Fruit.**—A company in Hamburg, Germany, asks to be put in communication with Canadian manufacturers of laths, crates and boxes for fruit, such as tomatoes, potatoes, etc. They ask for prices c.i.f. Canary Islands, Las Palmas and Santa Cruz de Teneriffe, and also c.i.f. South African ports. They state that they can sell large quantities to Hamburg houses, who buy for their business in the places above mentioned. Business can all be arranged cash against documents.
- 231 **Cars, (Motor), Enamelled Ware, Soap, Toilet Requisites, Stationery, Fancy Foods, Rolled Gold Jewellery, Photographic Requisites.**—A wholesale dealer and general importer, established in Kumbhakonam, South India, in 1896, and sending a New York reference, desires to purchase the above articles, cash against shipping documents.
- 232 **Chemicals, heavy, (borax, carbolic acid, sulphur), Drug-gist Sundries, Zinc Dust.**—A manufacturing company on the Pacific Coast, established 1895, desires to purchase the above mentioned articles.
- 233 **Corn, Seed, Oats, Etc.**—A Newfoundland merchant wishes to purchase the above.
- 234 **Doors, Joinery, Etc.**—A manufacturers' agent in London, England, desires to secure the representation of a firm manufacturing the above.
- 235 **Doors, Window Sash, Etc.**—A large firm of Leeds, England, timber merchants, having extensive connections with Yorkshire, desire to buy Canadian doors, window sash, etc., walnut boards and Air pine lumber.
- 236 **Engines.**—A correspondent in Edmonton, N. W. T., wishes to procure one 120 h.p. steam engine, and asks for description and prices of carding wool, spinning and weaving engines.
- 237 **Flour, Neutral Lard, Oleo Margarine.**—A correspondent in Christiania, Norway, advises us that he has buyers for the above named articles.
- 238 **Food Stuffs, Provisions, Cattle Foods, Drugs, Seeds and Beans.**—A London, England, company, of merchants and commission agents, wish to make Canadian connections to handle the above named articles. They offer to furnish references on request.
- 239 **Fruits (Dried and Evaporated).**—A London, England, company doing business in a large way in Wellington, New Zealand, who have, up to the present time been purchasing in San Francisco, ask quotations c.i.f. Wellington, for the above. They want evaporated apples, pears and apricots in 25 pound boxes, and the same goods canned in 2 pound tins, 20 per cent. and 10 per cent. syrup. English, Canadian and New York references are forwarded.
- 240 **Furniture, (Office), Roll Top Desks, Hotel Furniture.**—A large furniture dealer in England desires to get in communication with manufacturers of the above.
- 241 **Handles, (bass-wood broom, hickory hammer, axe, sledge and navy pick), Washboards, Clothes Pegs, Pastry Boards, Wheelbarrows.**—A manufacturers' representative in London, England, who has been favorably known to the Association for some time, and who is doing considerable Canadian business, desires to communicate with Canadian shippers in the above lines wishing to appoint a representative.
- 242 **Handles, (Edge tool, file, hammer, hay fork, spade and shovel), Pick Shafts.**—A North of England firm purchasing large supplies of the above invites quotations from Canadian manufacturers of the same.
- 243 **—Keyboards (Bass wood piano).**—A manufacturers' agent in London, England, dealing in English and foreign pianos, is prepared to handle the above in quantities.
- 244 **Mica.**—An important New York export commission house asks for the names and addresses of manufacturers in a position to ship mica.

- 245 **Nails, (Wire) and Fence Staples.**—A London, England, company doing business in a large way in **Wellington, New Zealand**, desires to procure wire nails and fencing staples in Canada. Information with regard to their requirements and specifications have been forwarded. London, New York and Canadian references are furnished.
- 246 **Oak and Pine.**—An enquiry is received from a firm of general importers and timber merchants in **Johannesburg, South Africa**, for Canadian white oak in planks, and American yellow pine (not pitch) in logs. They specify size of samples 12x6x1, and are willing to pay the cost incurred. They also request probable price f. o. b.
- 247 **Paper (Manilla) and Cut Manilla Boards.**—A company of general importers and exporters in **Melbourne, Australia**, with branches at Adelaide, Sydney, Brisbane, Hobart, Perth and Wellington, desire to purchase f.o.b. New York the above articles. Payment will be made by letter of credit. London and New York banks are given as references.
- 248 **Printing Materials.**—A correspondent carrying on the printing, binding and publishing business in **Kumbhakonam, South India**, and established in the wholesale and retail business since 1889 desires to purchase or sell on commission, cash against shipping documents, printing materials, such as machines, metal and wooden types, ornaments, pieces, inks, stationery, printing varnish, numbering machines, and all printing requisites, including samples of stationery, inks, varnishes, etc., wire stitching machines, eyelet machines, etc.
- 249 **Pulleys (Iron and wood split).**—A **Manchester, England**, firm desires to obtain prices of the above from Canadian manufacturers of the same.
- 250 **Pulp (wood).**—An **Italian** company with good English connections, desires to secure the agency for a Canadian shipper of pulp-wood.
- 251 **Resin.**—A **Copenhagen, Denmark**, firm asks for the addresses of Canadian exporters of the above.
- 252 **Rollers (Maple).**—A **Yorkshire, England**, engineering firm requiring at least 12,000 maple rollers per year, desire to get in touch with Canadian exporters of these goods. Direct shipment required about April. Regular shipment, a stipulation to do business.
- 253 **Salmon.**—A **Hull, England**, firm of produce merchants desire to deal in **British Columbia** salmon.
- 254 **Seats (birch bark).**—A **Yorkshire, England**, firm desires to get in touch with exporters of the above and ask for correspondence with Canadian exporters.
- 255 **Shovels, Hay Forks, and Wooden Rakes.** A **Manchester, England**, firm wishes to obtain prices of the above from Canadian manufacturers.
- 256 **Squares (Maple).**—A large timber merchant desires to get in communication with manufacturers and exporters of the above for bobbins for cotton mills.
- 257 **Spokes and Hubs.**—A **Lancashire, England**, firm wishes to obtain prices of the above, sizes, length 16 inches to 28 inches by 1¼ inch, 1½ inch, 1¾ inch, up to 3½ inch, from Canadian manufacturers of same.
- 258 **Sprinklers.**—A correspondent in **Los Angeles, California**, holding a patent for a hand sprinkler made out of copper or brass, wishes to communicate with a Canadian firm willing to undertake the manufacture of the same.
- 259 **Tinned Goods.**—A large wholesale and retail grocery firm with numerous branches desire to get in touch with Canadian exporters of tinned goods, specially salmon, tinned meats and tomatoes.
- 260 **Wheelbarrows.**—A **Lancashire, England**, firm desires the addresses of Canadian manufacturers of wheelbarrows.
- 261 **Wood, (Turned).**—A **Manchester, England**, firm desires prices c.i.f. Manchester, of all descriptions of turned wood, embracing brush stocks, cornice pole ends, rings, chair spindles, table and chair legs, broom handles, dowels, towel and blind rollers, from Canadian manufacturers.
- 262 **Woollen Goods.**—A correspondent in **Tokio, Japan**, desires to interest Canadian shippers of woollen goods in export trade of Eastern Asia, especially Japan and Vladivostock district. He is experienced in the woollen trade and speaks several different languages.
- 263 **Samples from South Africa.**—A manufacturers' agent in **Capetown, South Africa**, with offices also in Durban and Johannesburg, has forwarded specifications and in a large number of cases, samples, to the Canadian Manufacturers' Association of pick axe, broom and hammer handles, spokes, wood and iron garden seats, chair seats, horse and mule shoes, wooden washboards, single and double doors, windows, shutters, wheelbarrows, trucks, hand-carts, baling presses. These specifications and samples may be seen at the office of the Canadian Manufacturers' Association, or where necessary information can be given by letter.

Manufacturing Flat Wanted.

A manufacturing firm in Toronto desires to secure a floor of some two to three thousand feet, with power. The machinery necessary is light. Floor must be of such a nature that a suitable office can be arranged. Address will be given on enquiry to INDUSTRIAL CANADA.

Valuable Advertising Space for Sale

Commencing with the April number of **INDUSTRIAL CANADA**, we offer for sale the space on our outside front cover, occupied in this issue by a cut of the **British Columbia Legislative Buildings**, at the rate of \$30 per issue, with a discount of 20 per cent. to members.

In making this offer, we reserve the right to reject any copy which may not be acceptable. Display advertising will not be permitted. The advertisement must be in the form of an illustration, with just sufficient reading matter to identify it.

Applications will be considered in the order in which they are received, a preference being given first to our present advertisers, and second to members.

Have you a good view of your works, a photograph of an interior, or a finished article you are proud of? Here is a chance to show it to 4,500 people.

Industrial Canada - Toronto

To Provide Their Workmen with Homes.

Officers of the Dominion Coal Company at Glace Bay have formulated a plan whereby that corporation will assist its workmen to become owners of their own homes. The plan involves the furnishing by the company of suitable plots of land at the various collieries to its workmen at moderate prices. Upon these lots the company will erect dwellings suitable to the needs of the workmen and their ability to pay. Payments will extend over a period of eight years, and will involve the payment of but a small amount in advance of what the workmen now pay as rental. At the end of eight years the workmen become absolute owners of their homes. In the event of death by accident or otherwise of any workman adopting this plan, provision is made whereby the interests of the widow dependent upon the workman are safeguarded. Several plans of cottages have been prepared from which the workman may make his selection. It is believed that the offer will be very freely taken advantage of.

"Los Interes del Canada."

A bright little publication, bearing the above name, printed all in Spanish, but dealing entirely with Canadian commercial and industrial subjects, has just made its appearance. It is intended for circulation among the Spanish-speaking countries of this continent and South America, and will be devoted to making known to the people of these countries the resources of Canada, with a view to develop mutual intercourse and commerce. The paper is gotten up in a very attractive manner, well printed, on good stock, and freely illustrated, and its circulation should be beneficial to the Dominion in general, and to Canadian producers and manufacturers in particular. The publishers (Campbell Publishing Co., 34 Victoria St., Toronto) announce that they will be glad to co-operate with would-be exporters to Spanish America, giving them such assistance as they are able.

BONUS FOR FLOUR MILL

The Council of the Town of Fort Saskatchewan, in the Province of Alberta, are open to negotiate with any reliable firm engaged in the milling business, and have the following inducements to offer any firm erecting and maintaining a 200 bbl. flour mill:

A Cash Bonus of \$4,000.00

A Free Site

Exemption from Taxation for 10 years

The Fort Saskatchewan Board of Trade guarantee 5,000 bushels of good milling wheat free of charge.

For further particulars write—

H. E. DANIEL, TOWN CLERK,
FORT SASKATCHEWAN, - - ALBERTA.

Have You Changed Your Advertising Copy Yet?

Why don't you? You have failed to grasp one of the first principles of advertising if you think the same old thing will do from month to month.

"It keeps my name before the public, and that's all I want," you say.

Quite true, but keeping your name before the public is not enough in these days of strenuous competition. You cannot afford to be in the limelight unless you are going to be strictly up-to-date. Better to be more retiring than to give people the idea you are behind the times. Your advertisement is the index to your progressiveness. People judge of you by what they see. If you wore the same silk hat to-day that you wore twenty years ago, you would be put down as a back number. Quite evident, isn't it? And yet you think the same old advertisement will do you year in and year out!

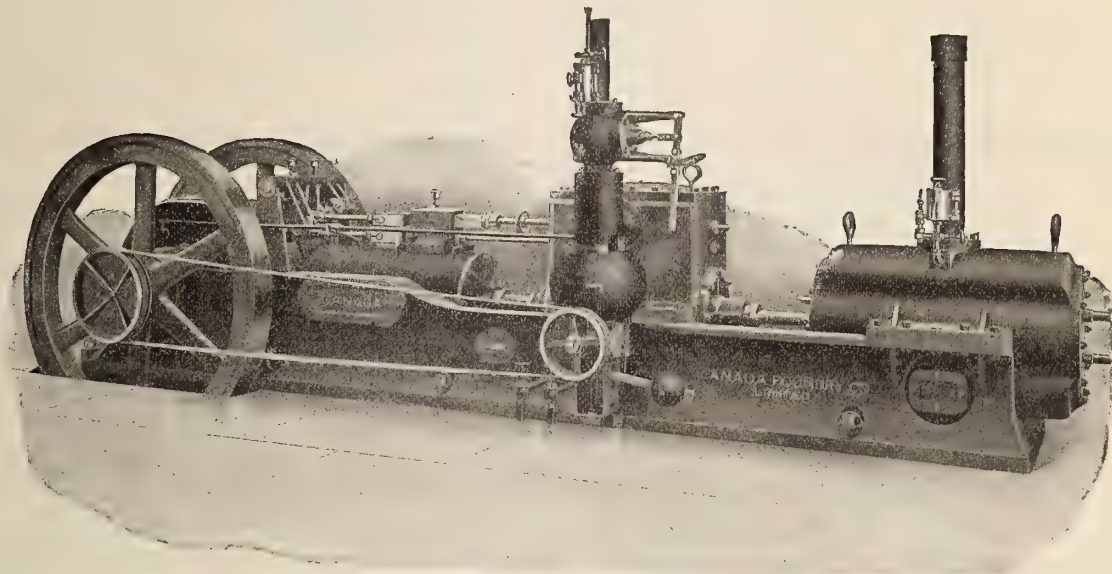
You advertise in order to sell goods. You send out circular letters for the same purpose. Perhaps you have a follow-up system. If your first letter doesn't produce results you never think of sending it to the same man a second time. You try something new. An advertisement is simply a circular letter to the readers of a paper. When a man gets it a second time he doesn't bother reading it at all. So far as he is concerned the appeal is wasted.

It costs INDUSTRIAL CANADA something to give this advice, but we are willing to bear the expense so long as it means bigger results for you.

If you are too busy to prepare your ads. yourself, send along your ideas to us. We will gladly put them in shape for you, and charge you nothing.

Industrial Canada - Toronto

CANADA AIR COMPRESSORS



**Steam, Belt or Power Drive.
Self-Contained.
Self-Oiling.**

**Straight Line or Duplex Type.
Any Pressure.
Any Capacity.**

SEND FOR BULLETIN No. 26

CANADA FOUNDRY COMPANY, LIMITED

Head Office and Works: TORONTO, ONTARIO

**District Offices: MONTREAL, HALIFAX, OTTAWA, WINNIPEG,
VANCOUVER AND ROSSLAND**

ESTABLISHED
1849**BRADSTREET'S**

Capital and Surplus - \$1,500,000

OFFICES THROUGHOUT THE CIVILIZED WORLD

Executive Offices:

NOS. 346 and 348 BROADWAY, N.Y. CITY, U.S.A.

THE BRADSTREET COMPANY gathers information that reflects the financial condition and the controlling circumstances of every seeker of mercantile credit. Its business may be defined as of the merchants, by the merchants, for the merchants. In procuring, verifying, and promulgating information, no effort is spared, and no reasonable expense considered too great, that the results may justify its claim as an authority on all matters affecting commercial affairs and mercantile credit. Its offices and connections have been steadily extended, and it furnishes information concerning mercantile persons throughout the civilized world.

Subscriptions are based on the service furnished, and are available only by reputable wholesale, jobbing and manufacturing concerns, and by responsible and worthy financial, fiduciary, and business corporations. Specific terms may be obtained by addressing the Company at any of its offices.

CORRESPONDENCE INVITED

OFFICES IN CANADA:

Halifax, N.S.
Montreal, Que.
St. John, N.B.Hamilton, Ont.
Ottawa, Ont.
Toronto, Ont.
Winnipeg, Man.London, Ont.
Quebec, Que.
Vancouver, B. C.**THOS. C. IRVING,** Gen. Man. Western Canada, Toronto.**ORGANS**

FOR FAMILY, SCHOOL OR CHURCH

PIANO STOOLS

FOR BEST TRADE

MUSIC CABINETS

FOR SHEETS OR ROLLS

OFFICE DESKS

FLAT OR ROLL TOP

CLOSET SEATS

AND TANKS

FOR HOME AND

EXPORT TRADE

SEND FOR CATALOGUES

The Goderich Organ Co., Ltd.

Goderich, Canada.

WIRE ROPEALL KINDS AND SIZES AND FOR
ALL PURPOSES

Standard and Lang's Patent Lay

PRICES RIGHT.

Rope Fittings—Rope Grease.

PROMPT SHIPMENTS.

THE B. GREENING WIRE CO., Limited
 HAMILTON, ONT. MONTREAL, QUE.
The Canadian Corundum Wheel Co.

LIMITED

HAMILTON

CANADA

MANUFACTURERS OF

Emery, Corundum and Adamite Wheels, made by Vitrified
Elastic and Silicate ProcessesONLY MANUFACTURERS OF VITRIFIED WHEELS
IN CANADA**Buy Canadian Made Wheels****ROBERT S. FRASER**

MANUFACTURER

Office—17 LEMOINE STREET, MONTREAL

Factory—CANAL BANK

Garnetted Wastes

Carbonised Wools

Tops and Noils

Wool Extracts

Peruvian Cottons

Worsted Yarns

Tetlows' English Card Clothing

TEXTILE MACHINERY AND MILL SUPPLIES

All Manufacturers of any standing should advertise in

Canada's Manufacturers, Business and
Professional Record and Gazetteer

with Descriptive and Illustrated matter

We insert all Business Houses, Manufacturers, and Professions in Canada under their respective headings free of charge.

This work will contain from 800 to 1,200 pages. Size of page 10 x 13 inches.

We will have a circulation that will cover all Canada. There are over 250,000 Business and Professional houses in the Dominion, and as all the best of these are subscribing or advertising, you can readily see the enormous circulation we will have at the price we are selling this work. We would like to have your subscription for the above. **Price \$1.50** in Canada, \$2.50 abroad, on delivery of book.

A few pages of advertising will be inserted at \$100.00 per page; half page \$60.00; one-third page \$45.00; quarter page \$35.00, including book.

Address:

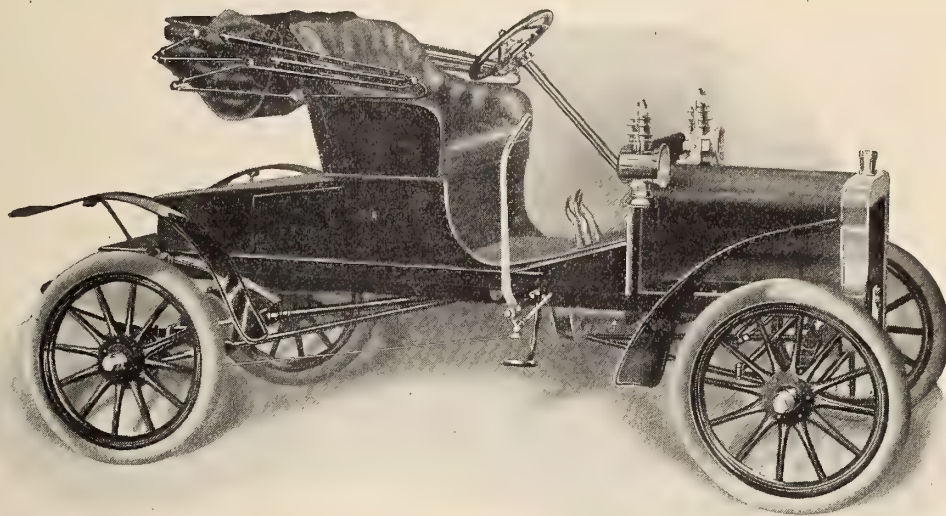
**Canada's Manufacturers, Business
and Professional Record Co.**

CHAS. D. McALPINE, the Oldest Publisher
in Canada, Publisher and Compiler, P.O.
Box 342, Toronto, Ontario, Canada

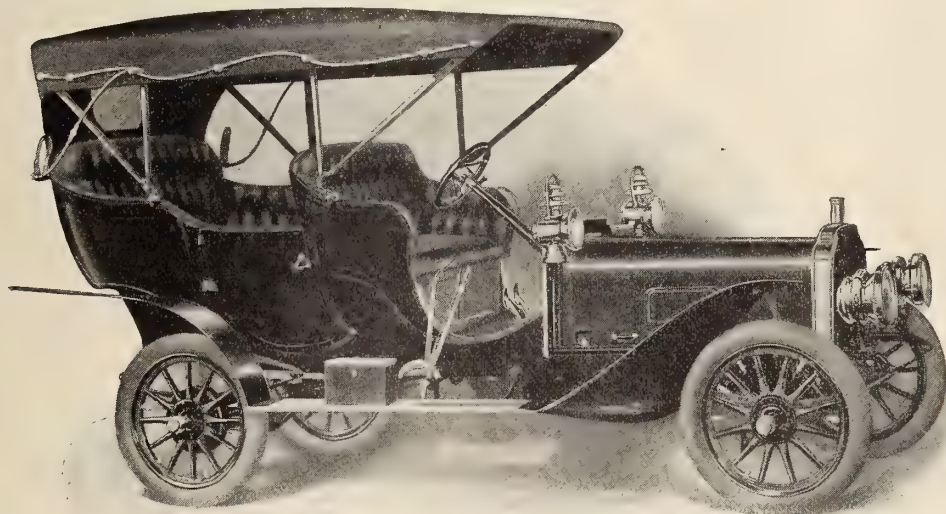
THE FORD

4 CYLINDER RUNABOUT

6 CYLINDER TOURING CAR




Model N.—4 Cylinder Vertical 15 H.P. 84 inch Wheel Base. Speed 40 miles. Weight 800 Pounds.
Direct Bevel Gear Drive. **Price \$650.**



Model K.—6 Cylinder Vertical, $4\frac{1}{2} \times 4\frac{1}{4}$. 40 H.P. Speed 50 miles per hour to 4 miles on a high gear.
Improved planetary transmission. 114 inch Wheel Base. Perfect Magneto Ignition.
Mechanical Oilier. Weight 2,400 pounds. **Price \$3,200.00.**

Write for full particulars about these two famous cars

THE FORD MOTOR CO. OF CANADA, LIMITED
WALKERVILLE  ONT.

The AMERICAN APPRAISAL CO.

**We Appraised
Over 1,000 Factories
In Canada & U.S.
In 1905**

Appraisals made before the fire.

CANADIAN OFFICE: 34 YONGE STREET, TORONTO

The AMERICAN APPRAISAL CO.

Our Canadian Clients:

McNair, Robert, Shingle Co.	Hastings, B.C.	Dominion Paper Box Co.	Toronto, Ont.
Fraser River Saw Mills, Ltd.	New Westminster, B.C.	Eckhart Casket Co.	Toronto, Ont.
Hastings Shingle Mfg. Co. (4 Plants) ..	Vancouver, B.C.	Elliott Mfg. Co.	Toronto, Ont.
Jackson, C. F. & Co.	Vancouver, B.C.	Ellis, P. W., & Co., Ltd.	Toronto, Ont.
Letson & Burpee Co., Ltd.	Vancouver, B.C.	Firstbrook Box Co., Ltd., The ..	Toronto, Ont.
Rat Portage Lumber Co.	Vancouver, B.C.	Freyseng Cork Co.	Toronto, Ont.
Ross & Howard	Vancouver, B.C.	Gendron Mfg. Co., Ltd., The ..	Toronto, Ont.
Vancouver Breweries, Ltd.	Vancouver, B.C.	Gutta Percha & Rubber Mfg. Co.	Toronto, Ont.
Vancouver Engineering Works.	Vancouver, B.C.	Hamilton, W. B., Shoe Co., Ltd.	Toronto, Ont.
Vancouver Printing & Pub. Co., The ..	Vancouver, B.C.	Heintzman & Co., Ltd.	Toronto, Ont.
Victoria Machine & Depot Co.	Vancouver, B.C.	Inglis, John, Co., Ltd., The ..	Toronto, Ont.
Victoria-Phoenix Brewing Co., Ltd.	Victoria, B.C.	King, J. D., Co., Ltd.	Toronto, Ont.
Ogilvie, W. W., Milling Co.	Winnipeg, Man.	McAlpin Consumers Tobacco Co.	Toronto, Ont.
Cornwall & York Cotton Mills Co.,	St. John, N.B.	Morrison, Jas., Brass Mfg. Co.	Toronto, Ont.
Jones, Simeon, Brewing Co.	St. John, N.B.	Northway, John & Sons, Ltd.	Toronto, Ont.
Clayton & Sons	Halifax, N.S.	Office Specialty Mfg. Co.	Toronto, Ont.
Consumers Cordage Co.	Halifax, N.S.	Ontario Wind Engine & Pump Co.	Toronto, Ont.
Henderson & Potts, Ltd.	Halifax, N.S.	Parker, W. R. P.	Toronto, Ont.
Montreal Pipe & Foundry Co.	Londonderry, N.S.	Smith, Rolph, & Co.	Toronto, Ont.
Christie Bros. & Co.	Amherst, Ont.	Standard Silver Co., Ltd., The ..	Toronto, Ont.
Fleury's, J., Sons.	Aurora, Ont.	Stauntons, Ltd.	Toronto, Ont.
Berlin Furniture Co., The ..	Berlin, Ont.	Thompson, D. W., Co.	Toronto, Ont.
Krug, H., Furniture Co.	Berlin, Ont.	Toronto Carpet Mfg. Co.	Toronto, Ont.
Lang Tanning Co.	Berlin, Ont.	Toronto Lithographing Co.	Toronto, Ont.
Williams, Greene & Rome Co., The ..	Berlin, Ont.	Wilkinson Plough Co.	Toronto Junction, Ont.
Brantford Carriage Co.	Brantford, Ont.	Girard & Gadin.	Three Rivers, Ont.
Verity Plow Co.	Brantford, Ont.	West Lorne Wagon Co.	West Lorne, Ont.
Waterous Engine Works, The ..	Brantford, Ont.	Canadian Salt Co., Ltd.	Windsor, Ont.
Edwardsburg Starch Co.	Cardinal, Ont.	Alaska Feather & Down Co.	Montreal, Que.
Chatham Wagon Co.	Chatham, Ont.	Belding, Paul & Co., Ltd.	Montreal, Que.
Manson-Campbell Co., Ltd.	Chatham, Ont.	Bell, J. & T.	Montreal, Que.
Wilson Bros.	Collingwood, Ont.	Canada Horse Nail Co.	Montreal, Que.
Mundell, John C., & Co.	Elora, Ont.	Canadian Iron & Foundry Co., The ..	Montreal, Que.
Lake Huron & Manitoba Milling Co.	Goderich, Ont.	Clark, William.	Montreal, Que.
Armstrong, J. B., Mfg. Co.	Guelph, Ont.	Consumers Cordage Co.	Montreal, Que.
Bell Organ & Piano Co., The ..	Guelph, Ont.	Davidson, Thos., Mfg. Co.	Montreal, Que.
Page-Hersey Iron & Tube Co.	Guelph, Ont.	Dominion Oil Cloth Co.	Montreal, Que.
Dowswell Mfg. Co.	Hamilton, Ont.	Dominion Wire Mfg. Co., Ltd.	Montreal, Que.
Good Roads Machinery Co.	Hamilton, Ont.	Gurd, Chas., & Co.	Montreal, Que.
Hamilton Bridge Works Co.	Hamilton, Ont.	Hosmer, C. R.	Montreal, Que.
Gemmons & Evil.	Hamilton, Ont.	King, Warden & Son, Ltd.	Montreal, Que.
Gurney-Tilden Co., The ..	Hamilton, Ont.	Laing Packing & Provision Co., The ..	Montreal, Que.
McPherson, John, Co., Ltd., The ..	Hamilton, Ont.	Lake of the Woods Milling Co.	Montreal, Que.
Meriden Britannia Co.	Hamilton, Ont.	Lang Mfg. Co., The ..	Montreal, Que.
Norton Mfg. Co.	Hamilton, Ont.	Londonderry Iron & Mining Co.	Montreal, Que.
Sawyer & Massey Co., The ..	Hamilton, Ont.	Merchants Cotton Co.	Montreal, Que.
Tuckett, Geo. E., & Son Co.	Hamilton, Ont.	Mitchell, Robt., Co., Ltd., The ..	Montreal, Que.
Ingersoll Packing Co.	Ingersoll, Ont.	Montreal Carriage Leather Co., The ..	St. Henri, Montreal.
Morrow, John, Machine Screw Co.	Ingersoll, Ont.	Montreal Pipe & Foundry Co.	Montreal, Que.
Canadian Packing Co.	London, Ont.	Ogilvie, W. W., Milling Co.	Montreal, Que.
Globe Casket Co.	London, Ont.	Peck, John W., & Co., Ltd.	Montreal, Que.
London Bolt and Hinge Works ..	London, Ont.	Rutherford, Wm., & Sons Co.	Montreal, Que.
Lincoln Paper Mills Co., Ltd., The ..	Merritton, Ont.	St. Lawrence Sugar Refining Co., Ltd.	Montreal, Que.
Meriden Britannia Co.	Niagara Falls, Ont.	Slater Shoe Co.	Montreal, Que.
Penman Mfg. Co.	Paris, Ont.	Standard Shirt Co.	Montreal, Que.
Matthews, Geo., Co., Ltd.	Peterboro, Ont.	Tooke Bros., Ltd.	Montreal, Que.
Maple Leaf Rubber Co.	Port Dalhousie, Ont.	Watson-Foster Co., The ..	Montreal, Que.
Elliott & Son	Prescott, Ont.	Williams Mfg. Co., The ..	Montreal, Que.
Toronto Casket Co.	Prescott, Ont.	Wilson, J. C., & Co.	Montreal, Que.
McKinnon Dash & Metal Co.	St. Catharines, Ont.	Matthews, Geo. Co., Ltd.	Hull, Que.
Thomas Brothers.	St. Thomas, Ont.	Amyot & Gauvin.	Quebec, Que.
Consolidated Lake Superior Co.	Sault Ste. Marie, Ont.	Boswell & Bro.	Quebec, Que.
Strathroy Furniture Co.	Strathroy, Ont.	Marsh, Wm. A. Co., Ltd.	Quebec, Que.
Toronto Bolt & Forging Co.	Swansea, Ont.	Peters, Simon, (Est. of) ..	Quebec, Que.
Allen Mfg. Co.	Toronto, Ont.	Ritchie, John, Co., Ltd., The ..	Quebec, Que.
Canada Crown Cork & Seal Co.	Toronto, Ont.	Turner, Hon. Richard.	Quebec, Que.
Christie, Brown & Co.	Toronto, Ont.	Corticelli Silk Co.	St. Johns, Que.
Clarke, A. R., & Co., Ltd.	Toronto, Ont.	Export Lumber Co.	Scotstown, Que.
Davies, Wm., Co., Ltd.	Toronto, Ont.	Scotstown Mill Co.	Scotstown, Que.
Dodge Mfg. Co., The ..	Toronto, Ont.	Montreal Pipe & Foundry Co.	Three Rivers, Que.

CANADIAN OFFICE: 34 YONGE STREET, TORONTO

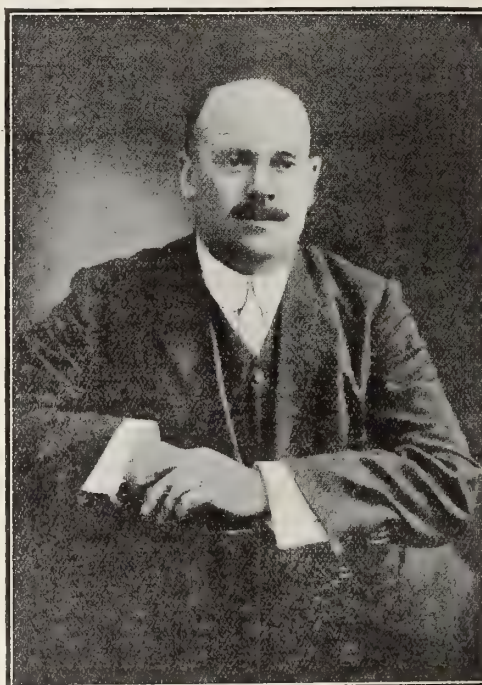
THE NEW ZEALAND INTERNATIONAL EXHIBITION

Just Stop and Consider for a Moment

THE NEW ZEALAND INTERNATIONAL EXHIBITION offers the Manufacturers of Canada an unprecedented opportunity. Through this Exhibition you may open up trade with one of the most prosperous countries in the world. We take it for granted, of course, that you appreciate the value of an export trade. It will prove of the greatest assistance in reducing your factory cost, in providing steady employment for your workmen, and in increasing your output.

There's Money In It For You

Many leading Canadian firms are reaping satisfactory results from Export trade. New Zealand wants our manufactured goods, yet her people are importing to-day from foreign countries many lines which we might supply. A share of this trade belongs to you. Are you willing to reach out for it?



G. S. MUNRO
Executive Commissioner

The Machinery of Export Trade is Not Complicated

There are many ways of establishing Export trade. You may send your own representatives to foreign countries; or you may conduct your sales through large buying and commission houses in America or New Zealand. But there is no more profitable way to introduce or advertise your goods than through a great International Exhibition such as the one offered you here.

An Easy Field to Start In

The markets of New Zealand are worthy of your attention. Her people import nearly all their manufactured goods. They offer a substantial preference to Canadian and other British goods. A new direct steamship service now connects us with their market, and above all else, the people of New Zealand desire to trade with the people of Canada. Are you willing to respond?

New Zealand's Imports

To better illustrate the enormous room for the expansion of Canadian export trade with New Zealand, we wish to draw attention to the following figures of New Zealand's imports for the past year, showing the countries she bought from and the amount in each case.

THE NEW ZEALAND INTERNATIONAL EXHIBITION



THE RIGHT HON. THE PREMIER,

SIR R. J. SEDDON, P.C., LL.D., President

Great Britain	\$39,910,000	Japan	\$425,000
Australia	9,465,000	France	275,000
United States	7,640,000	Singapore	185,000
Fiji Islands	2,585,000	Pacific Islands	150,000
Germany	1,545,000	Holland	145,000
India	1,450,000	China	105,000
Ceylon	865,000	Other countries	550,000
Belgium	600,000		
Canada	565,000	Total	\$66,460,000

Notice where Canada comes in. About four-fifths of one per cent. is all she is getting of this trade at present! With the advantages she enjoys, this figure might easily be multiplied by 10. And it will be in a very few years. Who will get the business? Unquestionably the man who demonstrates the superiority of his goods to the 2,000,000 people who are expected to visit the Christchurch Exhibition will stand first in line.

Some Points to Remember

1. The Department of Agriculture of the Dominion Government will erect a special building, which will be devoted exclusively to the accommodation of exhibits illustrating the natural and manufacturing products of Canada.
2. The Department of Agriculture offers to pay transportation charges (one way only) on all exhibits which are accepted. Space, maintenance and installation will also be provided for free of charge.
3. All goods sold will be *plus duty*. Those returned may be reshipped *free of duty*.
4. All exhibits not under the charge of the Department of Agriculture, consigned to the New Zealand International Exhibition from any town in Canada served by the Canadian Pacific Railway, will be carried by that Company to the port of Vancouver free of charge.
5. Reduced rates on exhibits are being arranged with all steamship companies trading to New Zealand.
6. Every reasonable facility will be afforded exhibitors who desire to make a feature of processes of manufacturing.

Last Call to Canadian Manufacturers

March 31st is the last day for receiving applications for space. The charge for space for Canadian Exhibits not accepted by the Department of Agriculture will be 2s. per square foot and upwards, 25 per cent. on allotment, and the balance one month before the opening of the Exhibition. Exhibition opens November 1st and will continue until about April 10th, 1907.


Applications for space in the Government pavilion should be addressed at once to Mr. Wm. A. Burns, Exhibition Branch, Department of Agriculture, Ottawa, who will also be pleased to answer enquiries.

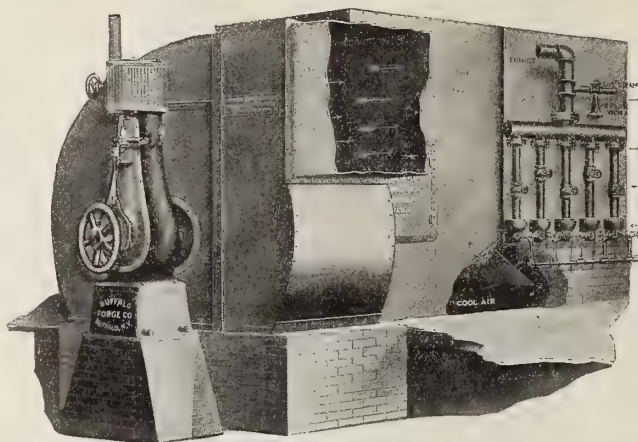
Any further information desired will be cheerfully supplied by Sir Sanford Fleming, Ottawa, the Honorary Commissioner, or by the Secretary, Canadian Manufacturers' Association, Toronto, who is Commissioner in Canada for the Exhibition.


THE HON. SIR J. G. WARD, K.C.M.G.,
Minister for Industries and Commerce,
Vice-President


Factory Heating

AND VENTILATION BY THE FAN SYSTEM POSSESSES INHERENT
ECONOMICAL & HYGIENIC ADVANTAGES

 It requires one-fifth the radiating surface (expensive piping, coils, radiators, etc.) of the direct system. It occupies no valuable floor space.



 Its flexibility meets weather changes—Periods of unusual coldness—and provides for future extensions. It means a centrally located plant in charge of one competent man.

 No Steam Losses.

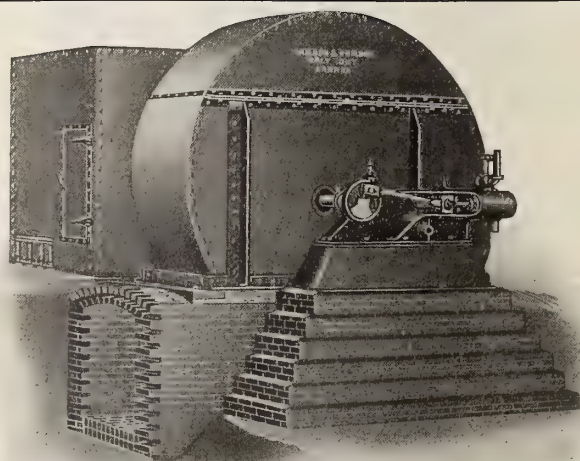
Condensation returned direct to Boiler.

Can we interest you further in this System?

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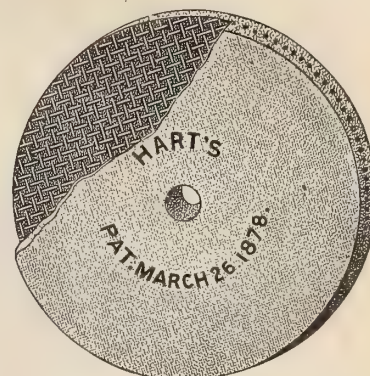
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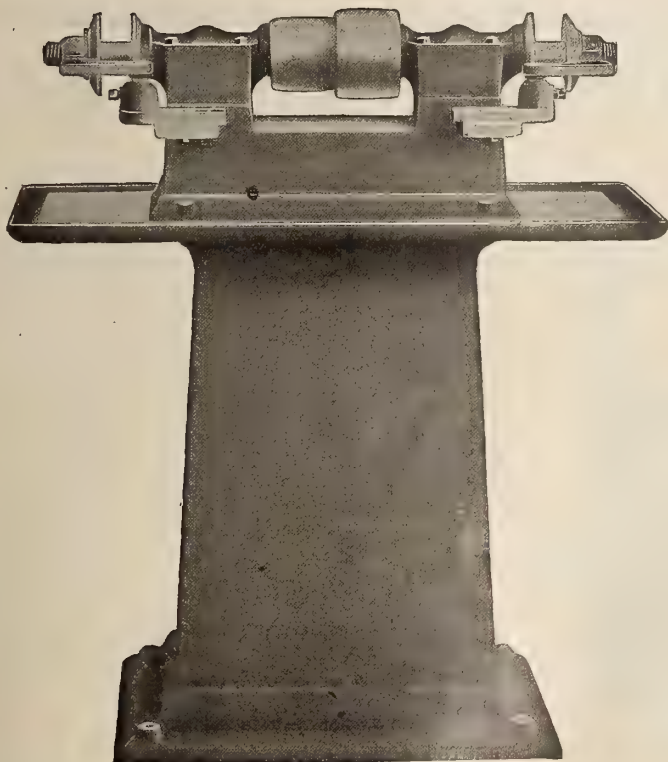
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The Old Reliable

There are still some manufacturers who foolishly persist in using Emery Wheels. Emery is a mechanical admixture of corundum and magnetite or hematite. It is the presence of the corundum in the emery that gives to it its abrasive qualities and makes it of commercial value, and the abrasive efficiency of emeries varies according to the percentage of corundum they contain.

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No. 16

Built on Scientific Principles.

Can be used either on Bench or Pedestal, with or without Table.

Will carry two wheels, 12 x 3 inches.

Bearings Absolutely Dust Proof.

Fitted with Automatic Oilers.

Countershaft has Cone Pulley, 12 and 13 x 3½ inches.

Tight and Loose Pulleys, 6 in. diam., 4 in. face, and should run 750 Revolutions per minute.

Ready for Immediate Delivery

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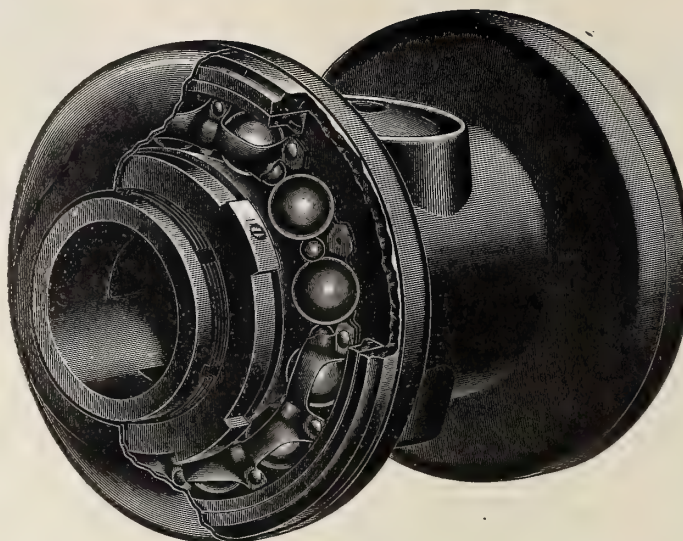
100 PLANTS EQUIPPED IN CANADA

A Bearing
Simple in Construction
and
Practical in Operation

"As near as we can estimate there is, we should think, at least fifty per cent. saving in power with the Chapman bearings.

"ALABASTINE CO., LTD.,
"Paris, Ont."

Durability and
Economy of Operation
Secure its Adoption



A Bearing having the
Highest Known
Efficiency
as a Power Saver

"We are of the opinion, in our case, that we save at least twenty per cent. in power with the Chapman Double Ball Bearing, and we also find a great saving in oil. The bearings are also clean; we have no oil running down hangers, posts, etc.

Yours truly,
McLAUGHLIN CARRIAGE
Co., LIMITED,
Oshawa, Ont."

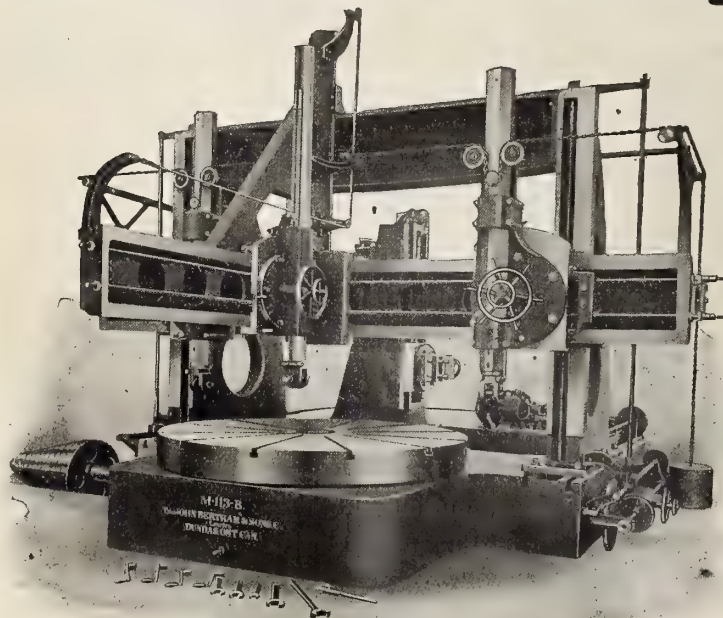
We Guarantee You
a Saving
of 75 per cent.
of Your Shaft Friction

The Chapman Double Ball Bearing Company of Canada, Limited

Office—39 Scott Street.

Factory—39 Pearl Street, TORONTO.

Bertram 12-16 ft. Boring and Turning Mill

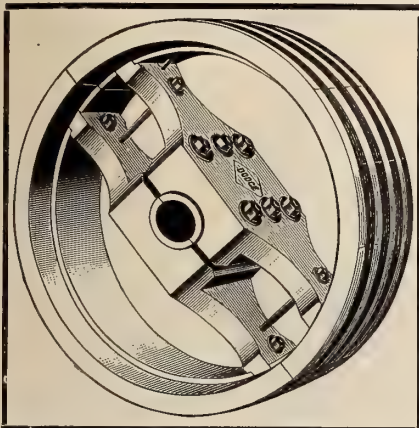


WITH rear housing and front extension arm, especially designed for turning and boring large diameters. As shown in the illustration this machine admits 12 feet 4 inches between housings, 6 feet 10 inches under tool holders and 7 feet 4 inches under crossrail, has two turning tools on crossrail, one boring and turning tool on the extended arm and a fourth tool on the back housing. The rear housing is adjusted by power in and out, so that diameters from 16 feet down to 12 feet may be turned. The tool-slide has a vertical feed by power and quick hand adjustment. The housings are moved by power, an auxiliary motor being provided for this purpose and also for elevating the crossrail.

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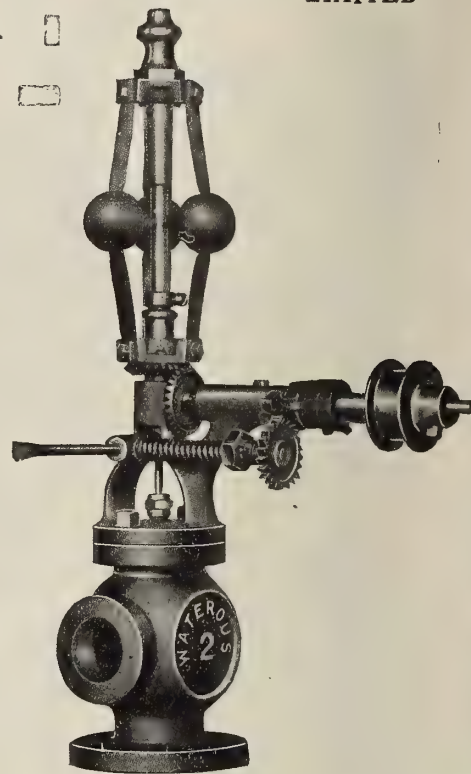
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THE SPEED OF
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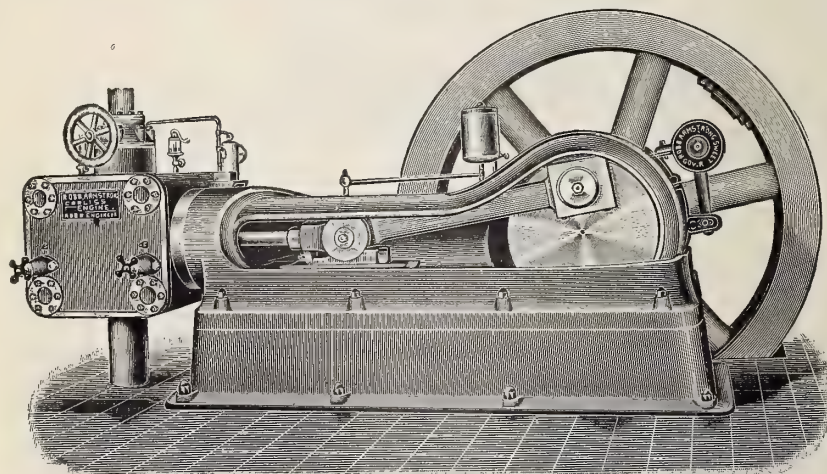
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The above refers to a 350 horse power Robb-Armstrong Corliss engine and two 175 horse power Robb-Mumford boilers installed by us.

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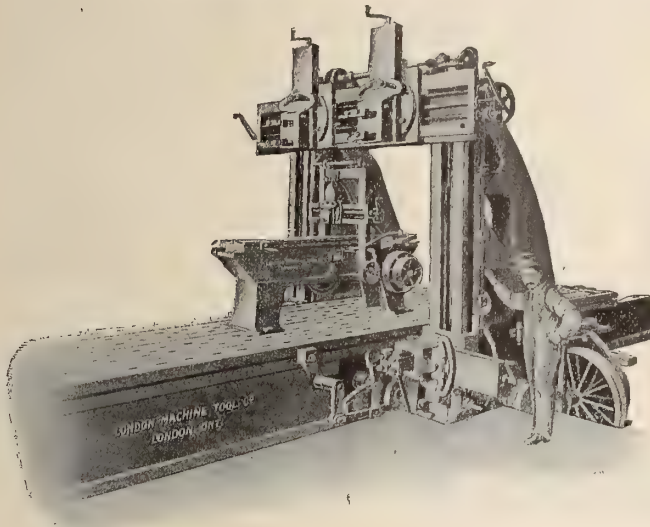
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Watson Jack & Company, Bell Telephone Building, MONTREAL.
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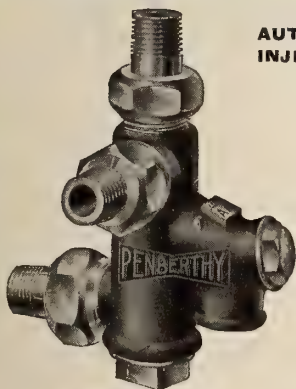
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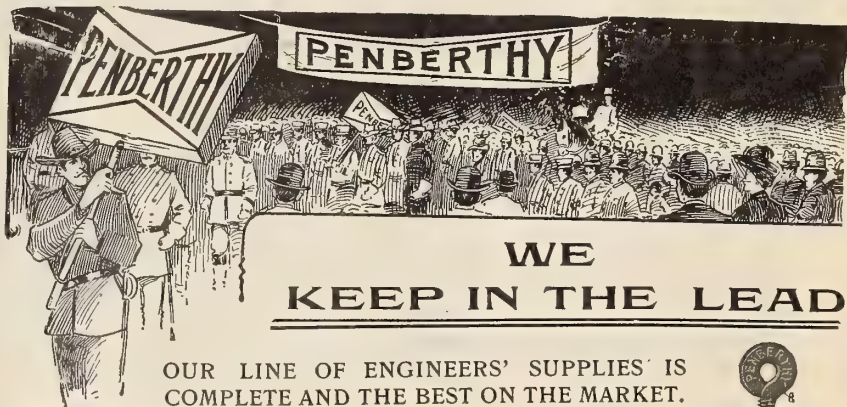
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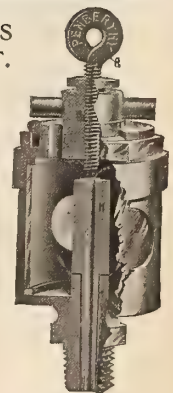
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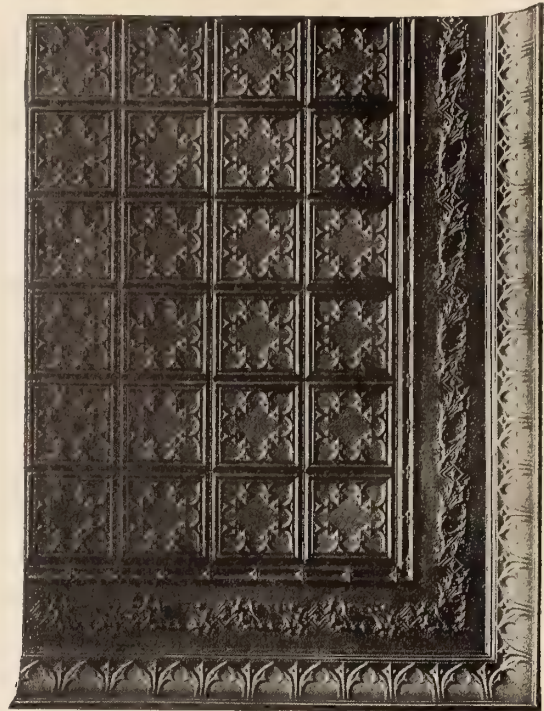
Yours faithfully,

THE JOHN D. IVEY CO. LIMITED.

Steno.-#2, Dict. by J.D.I.

J.D.I.
President.

*P.S.
The work is thoroughly
in every way J.D.I.*



Ceiling Design No. 5053

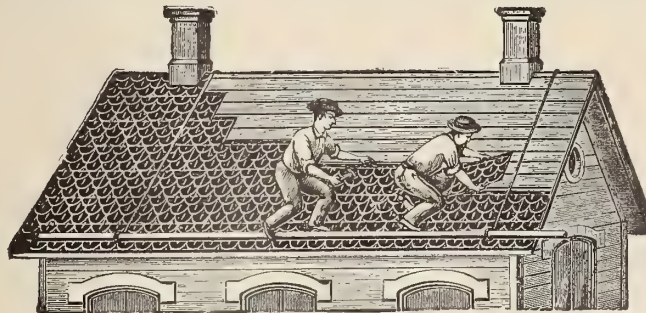
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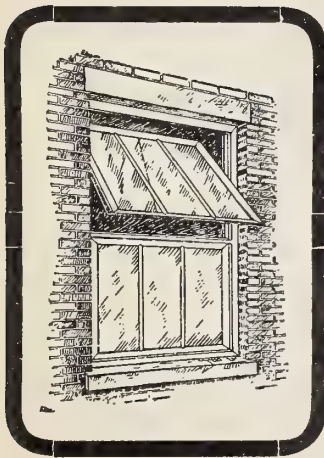
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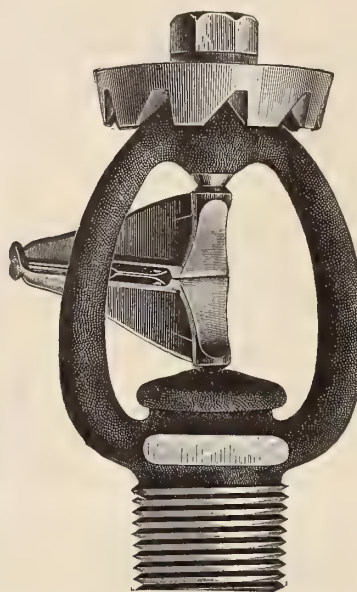


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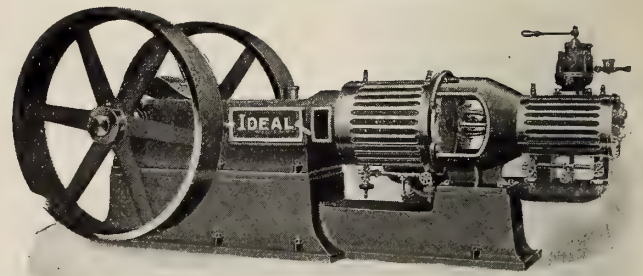
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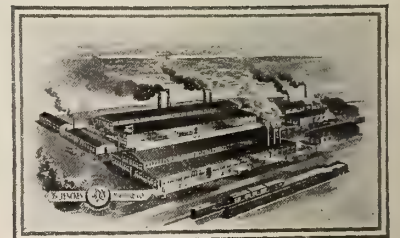
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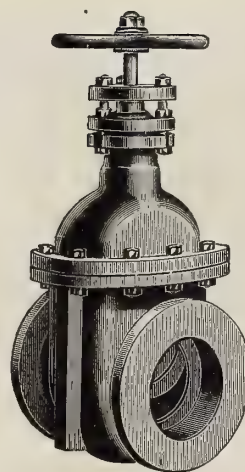
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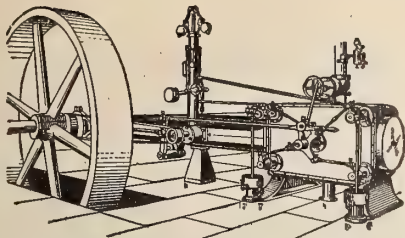
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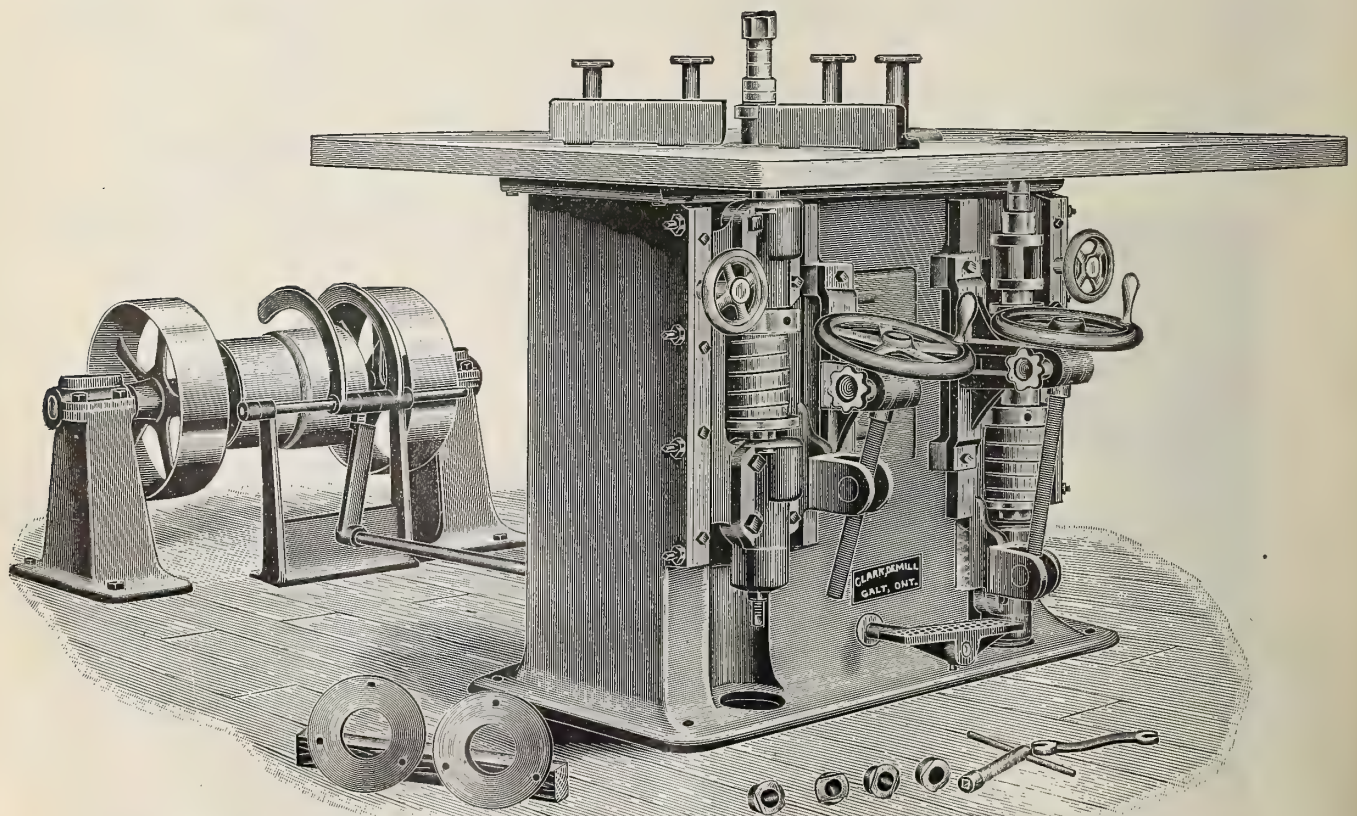
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EXECUTIVE COUNCIL

The regular monthly meeting of the Executive Council of the Canadian Manufacturers' Association was held in the Board of Trade Building, Toronto, on Thursday, February 15th, at 2.15 p.m.

There were present: Messrs. Geo. Anderson, Toronto; Fred. Birks, Montreal; P. H. Burton, Toronto; H. Cockshutt, Brantford; John Dick, Toronto; Richard A. Donald, Toronto; L. V. Dusseau, Toronto; H. W. Fleury, Aurora; Geo. D. Forbes, Hespeler; S. R. Hart, Toronto; E. G. Henderson, Windsor; R. McLaughlin, Oshawa; J. B. McLean, Toronto; Jas. Maxwell, St. Mary's; Jas. P. Murray, Toronto; W. C. Phillips, Toronto; John Ransford, London; A. S. Rogers, Toronto; T. A. Russell, Toronto; J. T. Sheridan, Toronto; Jas. M. Sinclair, Toronto; Wm. Stone, Toronto; R. L. Torrance, Guelph; C. H. Waterous, Brantford; F. H. Whitton, Hamilton; and S. M. Wickett, Toronto.

In the absence of the President, Mr. Harry Cockshutt, Vice-President of the Association, presided.

Communications were received from the following members of the Council regretting that they were unable to be present: Messrs. C. C. Ballantyne, President; Geo. E. Amyot, Quebec Vice-President; W. M. Gartshore, S. W. Ewing, C. N. Candee, J. H. Burland, Chairman Montreal Branch; T. H. Estabrooks, A. W. White, J. M. Taylor, Wm. Smail, Geo. Sweet, T. A. Staunton, Geo. Gillies.

Reports of the Officers and Committees were presented as follows:

Treasurer's Report.

In the absence of the Treasurer, his statement was presented by the Secretary. It showed the finances of the Association for the six months ending January 31st, 1906, to be in a satisfactory condition.

Finance Committee.

The Finance Committee report recommended the appointment of Mr. J. F. M. Stewart to the position of Secretary of the Association, vacated by the resignation of Mr. R. J. Younge, and Mr. G. M. Murray, Editor of INDUSTRIAL CANADA, to the position of Assistant Secretary.

Mr. J. R. Marlow, Manager of the Transportation Department, and Mr. Dakers Cameron, Secretary of the Montreal Branch, were also recommended for re-engagement.

Railway and Transportation Committee.

The report of the Railway and Transportation Committee is published in another column.

Reception and Membership Committee.

Mr. L. V. Dusseau, Chairman of the Committee, presented this report. It referred to the successful dinner held by the London members of the Association on February 9th, reported that the dinner which was to have been held in Sherbrooke during February, had been postponed. A report was made regarding the negotiations being carried on with the railway companies to secure attractive rates for the Winnipeg Convention, which, up to the present time, had not resulted satisfactorily, and it suggested the possibility of the Council being asked to change its decision to hold the Annual Convention in Winnipeg.

Seventy applications for membership were recommended for acceptance. This list is published in another column.

Industrial Canada Committee.

The report of the INDUSTRIAL CANADA Committee was

presented by the Chairman, Mr. T. A. Russell. It pointed out the satisfactory financial position of the paper, and expressed appreciation to Mr. S. M. Wickett, Toronto, and Mr. C. R. McCullough, Hamilton, for allowing their names to be added to the Committee.

Other recommendations were:

(1) That the Advertising Manager, Mr. B. L. Anderson, be re-engaged, his remuneration to be on a salary basis.

(2) That the future numbers of INDUSTRIAL CANADA be published after the same plan as was adopted in the February issue.

(3) That the proceedings of the Executive Council and Committees of the Association be inserted only in those copies of INDUSTRIAL CANADA distributed to members.

The Committee expressed its appreciation of the services of Mr. G. M. Murray, who has been Editor of INDUSTRIAL CANADA for the past two years, and who has resigned to assume the duties of Assistant Secretary of the Association.

The report also recommended that steps be taken to secure advertisements for INDUSTRIAL CANADA from British manufacturers, but on motion this was referred back for further consideration.

Insurance Committee.

Mr. P. H. Burton, Chairman of the Insurance Committee, made a verbal report. He stated that the general work of the Department was proceeding very satisfactorily, and that the Insurance Committee expected to have important recommendations to present to the Council at its next meeting. He also referred to the assistance the Department had been giving the Mutual Fire Insurance companies in their endeavor to have the Provincial Government appoint Fire Marshals for the Province.

Tariff Committee.

In the absence of the Chairman of the Committee, the report as given below, was presented by the Secretary:

"Your Tariff Committee beg to report that although no meeting has been held since the last meeting of the Executive Council, the instructions of the Executive Council have been carried out in the presentation of a general case before the Tariff Commission at Ottawa.

The memorial containing the views of the Association was presented before the Commission by the President of the Association on the 6th inst., the following other members of the Council attending with him: Messrs. Lloyd Harris, Ontario Vice-President; D. W. Robb, Nova Scotia Vice-President; W. K. George, Ex-President; the Chairman of the Tariff Committee and the Secretary.

The memorial outlined the general conditions existing in Canada at the present time, replied to the requests for reductions in the tariff made by farmers and others, and urged upon the Commission the adoption of a strong Canadian tariff that would encourage the manufacture in Canada of all classes of goods which can reasonably be made here, and the purchase of our surplus requirements as far as possible from British sources. The memorial has generally been regarded as an unanswerable argument for a national tariff along the lines indicated, and has met with favorable comment in Great Britain as well as in the Dominion."

After the adoption of this report it was moved by Mr. T. A. Russell, seconded by Mr. R. McLaughlin, and carried unanimously that the Executive Council express its thanks

to the Tariff Committee for the care exercised in preparing the memorial referred to, and for presenting the same to the Tariff Commission.

The Secretary verbally reported on the work of the Quebec, Manitoba and Nova Scotia Branches, and reports, which are published in another column, were read from the Montreal and Toronto Branches.

Preference by Canadian Ports.

In connection with the report of the Nova Scotia Branch the Secretary referred to a resolution which had been adopted, asking the Executive Council to approve of the application of the preference only to goods entering Canada direct from the country of their origin. A motion favoring this principle was moved by Mr. E. G. Henderson, and seconded by Mr. J. P. Murray. It was discussed by Messrs. Jas. Maxwell, P. H. Burton, John Dick, Geo. Anderson, A. S. Rogers, S. R. Hart, R. McLaughlin, R. L. Torrance and T. A. Russell, and was finally unanimously carried, as follows:

"Executive Council, Canadian Manufacturers' Association, desirous of building up Canadian ports, unananimously favors application of Canadian preference only to goods entering Canada direct from the country of their origin."

Before adjournment, the loss by death of one of the members of the Council, the late Mr. E. B. Eddy, was referred to, and a resolution was passed as follows:

"That the Canadian Manufacturers' Association has learned with profound regret of the death of Mr. E. B. Eddy, one of its oldest and most esteemed members, and for many years a member of the Executive Council,

"That we regard the death of Mr. Eddy as a distinct loss to the manufacturing interests of Canada, and to the whole Dominion as well, and

"That we desire to place on record our high appreciation of his life, our deep regret at his death, and our heartfelt sympathy with Mrs. Eddy in her sad bereavement."

The meeting then adjourned.

RAILWAY AND TRANSPORTATION COMMITTEE

The regular monthly meeting of the committee was held on February 7th.

The following are the principal subjects dealt with:—

Eastbound Rates from Ontario Points.

The Manager of Transportation Department submitted statements showing the rates in effect from the principal points in Ontario eastbound; also statements giving rates from principal United States shipping points. Other statements showing the rates westbound as compared with eastbound were before the committee. These statements uniformly indicate that the basis of rates applied from Ontario points, Toronto and west, to eastern territory in Ontario, Quebec and the Maritime Provinces are much higher than applied in the opposite direction or to the same points from United States cities. It was the opinion of the committee that this matter should be thoroughly investigated. The manager of the department was instructed to communicate with the Montreal Branch on the subject, and if necessary with the railways, reporting the result to the committee at its next meeting.

Interior British Columbia Rates.

Communications were read from Mr. McLennan, Chairman, and Mr. Alexander, Secretary of the British Columbia Branch, regarding complaint by the Boards of Trade of Vancouver and Victoria of alleged discrimination in rates east-

bound from Pacific coast points to stations on the Canadian Pacific to and including Calgary and McLeod. The matter is now before the Railway Commission, and it was requested that the manager of Transportation Department should be associated with Mr. Joseph Martin in dealing with the question before the Board. After very careful deliberation, it was the opinion of the committee that it was impossible to render assistance to Vancouver and Victoria without conflicting with the interests of the members of this Association at Nelson, Calgary, Edmonton, Winnipeg, and other points. The committee, therefore, recommended that the Manager of Transportation Department should not interfere in the controversy.

Temiskaming and Northern Ontario Railway.

Mr. Jaffray called attention to the development of traffic along the line of the Temiskaming and Northern Ontario Railway, and pointed to the fact that at present there is no physical connection between the Temiskaming and Northern Ontario Railway and the Grand Trunk Railway, traffic between these lines being transferred by means of the Canadian Pacific Railway. He considered a direct connection was desirable in the interests of Ontario manufacturers, and recommended that the question be taken up by the committee. Mr. Jaffray also suggested for the consideration of the committee the advisability of connection between the Temiskaming and Northern Ontario Railway and the new Sudbury branch of the Canadian Pacific or James Bay Railway. The Manager of Transportation Department was instructed to investigate the subject and report.

The Manager of the Department brought again to the notice of the committee the suggested plans for a deep waterway and ship railway from Georgian Bay to Lake Ontario. The committee unanimously agreed that it would be inadvisable for the Association to express an opinion on this subject at the present time.

Classification Matters.

The Manager of Transportation Department reported progress of the various classification matters now pending adjustment. The Committee recommended the appointment of the following gentlemen as members of the Railway and Transportation Committee: O. J. Donagh, T. A. Staunton, T. Christie, of Toronto, and J. S. N. Dougall, and Hon. J. D. Rolland, Montreal.

A communication from Mr. Murray regarding lost and astray freight was referred to the Manager of Transportation Department for reply.

During the month the Department has been of material assistance to members in different parts of the country, answering enquiries of various kinds regarding transportation matters.

MONTREAL BRANCH.

The regular monthly meeting of the Montreal Executive Committee was held on February 8th. Col. Jeffrey H. Burland having returned from England, presided for the first time since his election to the Chairmanship of the Branch. There were also present:—Messrs. D. Lorne McGibbon, C. C. Ballantyne, J. J. McGill, Geo. Esplin, S. W. Ewing, Geo. E. Drummond, Clarence F. Smith, and J. H. Birks.

The report of the Technical Education Committee with amendments as approved at the annual meeting was received.

The attention of the Committee was directed to the facilities for technical training in Montreal, and after discussion the Secretary was instructed to communicate with the Committee of the Montreal Technical Institute and find out if any steps were being taken to erect a Technical School in

the city, or if subscriptions were being solicited for that purpose.

The advisability of holding a dinner or a social entertainment in the Branch during the winter season was considered, and a special committee was appointed to carry out such a scheme.

Five membership applications were recommended for acceptance.

During the month two important meetings of the Montreal Gold & Silver Smiths' Section were held.

A meeting of the Legislation Committee was held on February 12th to consider what steps should be taken to oppose the Workmen's Compensation Bill, which has once again been introduced in the Quebec Legislature. A strong delegation was appointed to wait upon the Quebec Government and to co-operate with the Quebec Branch in the matter.

TORONTO BRANCH.

The Toronto Branch Executive Committee have held two well attended meetings since the last report. Different matters were dealt with as follows:—

The Secretary of the Indiana Editorial Association wrote us to the effect that during the coming summer a party of some three hundred editors were likely to visit Toronto, and other Canadian points, and wished to find out if steps would be taken to entertain them by local organizations. This was dealt with favorably and referred to the Dinner Committee for action, with the request that they confer with the City authorities and endeavor, if possible, to have the City recognize this visit in some official way.

At the request of the Property Commissioner of the city a conference was held regarding the terms of the present Smoke By-law. While this conference was adjourned without any definite decisions, it was generally considered that the conference had been a success, and it was hoped that at a further meeting to be held a satisfactory By-law would be agreed upon.

The Branch took action to oppose the principle involved in the resolution before the City Council to fix the minimum wage for city employees and for men employed on city contracts at \$2.00 per day, by circulating a petition amongst members opposing the same, and by appearing in large numbers before the Board of Control on the 13th inst. to make a formal protest. The Board of Control has not as yet taken any action.

A resolution calling for stricter laws regarding the licensing and regulating of Pawn Brokers was approved of, and a committee appointed to present the same to the Provincial Government.

Fifteen applications for membership were approved of, and recommended for acceptance.

NEW MEMBERS.

Ayr, Ont.

JOHN WATSON MFG. CO., LTD.—Implements and Specialties.

Brantford, Ont.

G. F. STERNE & SON.—Asbestos Cements, and Foundry Specialties.

Bruce Mines, Ont.

L. H. DECEW & SON.—Lumber.

Chatham, N. B.

MIRAMICHI PULP & PAPER CO., LTD.—Sulphite Wood Pulp.

Chicoutimi, Que.

LA COMPAGNIE DE PULPE DE CHICOUTIMI.—Mechanical Pulp.

Cobourg, Ont.

COBOURG MATTING & CARPET CO., LTD.—Mattings and Jute Carpets.

Cornwall, Ont.

THE CORNWALL FURNITURE CO., LTD.—Bedroom and Dining Room Furniture.

Dunnville, Ont.

MONARCH KNITTING CO.—Knitted Goods.

Fraserville, Que.

THE RIVER DU LOUP PULP CO., LTD.—Ground Wood Pulp.

Glenboro', Man.

SCHWALM & FAIR.—Flour and Feed.

Granby, Que.

H. & T. GIDDINGS & CO.—Chairs and Baby Carriages.
THE GRANBY CARRIAGE CO.—Carriages, Sleighs, Etc.

Halifax, N. S.

THE CANADIAN RUBBER CO. OF MONTREAL, LTD.—(Lloyd L. Libby, 6th Member.)

FARQUHAR BROS.—Plumbers' Supplies.

Hamilton, Ont.

CANADIAN BEARINGS, LTD.—Taper Roller Bearings, Special and General Machinery.

THE DOMINION BELTING CO., LTD.—Cotton Duck Belting.

Hespeler, Ont.

H. W. KARCH.—Woollen Machinery.

Joliette, Que.

WM. COPPING.—Lumber.

Kearney, Ont.

THE KEARNEY TIMBER & MFG. CO.—Wood-seat Chairs.

Kingston, Ont.

THE W. I. CROWTHERS CO.—Biscuits and Confectionery.

Lachute, Que.

CHATHAM PULP & PAPER CO., LTD.—Ground Wood Pulp.

Lachute Mills, Que.

THE LACHUTE SHUTTLE CO., LTD.—Shuttles.

Lake Megantic, Que.

LAKE MEGANTIC PULP CO.—Ground Wood Pulp, Sawm Lumber.

London, Ont.

THE HASTINGS HAT & CAP MFG. CO., LTD.—Hats, Caps and Furs.

STERLING BROS.—Boots and Shoes.

STEVENSON BROS. & BAKER.—Jewelry.

J. TUNE & SON.—Aerated Waters.

Lucknow, Ont.

THE LUCKNOW FURNITURE CO.—Tables.

McGregor, Ont.

A. A. SCOTT.—Hardwood Lumber, Staves and Hoops.

Mispec, N. B.

ST. JOHN PULP & PAPER CO.—Sulphite Pulp.

Montreal, Que.

THE CANADA ELECTRIC CO.—Electric Fixtures and Apparatus.

THE CANADA PAPER BOX CO., LIMITED.—Paper Boxes.

THE CRAIG PIANO CO.—High-grade Upright Pianos.

THE EMPIRE MANUFACTURING CO., LIMITED.—Men's Shirts, Ladies' Skirts, Coats and Costumes.

MONTREAL TENT, AWNING & TARPAULIN CO.—Tents, Awnings, Sails, Flags, Bags, Tarpaulins.

NATIONAL PRINTING CO., OF MONTREAL.—Posters and Printing.

Newcastle, N. B.

THE ANDERSON FURNITURE CO., LTD.—Furniture.

Orillia, Ont.

CARRS MACKINAW CLOTHING CO.—Mackinaw Clothing, Wool Mitts.

J. R. EATON.—General Builders' Supplies.

Ottawa, Ont.

J. R. BOOTH.—Lumber, Pulp and Paper.

THE OTTAWA STEEL CASTING CO., LTD.—Steel and Mill Machinery.

Quebec, P. Q.

J. B. BEDARD & FRERES.—Baking Powder.

BOSWELL BROS.—Brewers.

DECHENE & POULIN.—Furs.

Z. PAQUET.—Men's Clothing, Ladies' Skirts, Underwear and Hats.

F. C. SCHRYBURT.—Boots and Shoes.

Stratford, Ont.

CENTRAL FURNITURE CO.—Furniture.

Strathroy, Ont.

THE DYMOND SOMMERVILLE CO., LTD.—Upholstered Goods, Mattresses, etc.

Thorold, Ont.

THOROLD PULP MILL.—Pulp.

Toronto, Ont.

J. E. BROWN & CO., LTD.—Jewelry.

BUSINESS SYSTEMS, LTD.—Loose Leaf Stationery.

DOMINION WALL PAPER MILLS.—Wall Paper.

ECONOMICAL GAS APPARATUS CONSTRUCTION CO., LTD.—Gas Works Plant and Apparatus.

THE ECONOMICAL MFG. & SUPPLY CO., LTD.—Graphite Products, Belt Dressing, Boiler Compound.

EXPANDED METAL & FIREPROOFING CO., LTD.—Expanded Metal.

I. C. FELL & CO.—Engravers and Stamp Manufacturers.

GENERAL LEATHER GOODS, LTD.—Leather Goods.

HUNTER & SMITH.—Carriages and Waggons.

CHAS. McALPINE.—Directories, etc.

THE McLACHLAN-JOY ELECTRIC CO., LTD.—Electric Light and Power Apparatus.

MORTIMORE & BLACKBEY.—Society Regalia and Paraphernalia.

THE TORONTO FLOWER & HEADWEAR MFG. CO.

TORONTO PRESSED STEEL CO.

West Lorne, Ont.

WEST LORNE WAGGON CO.—Waggons, Sleighs, Carts.

Winnipeg, Man.

THE FROST & WOOD CO., LTD.—(J. E. Ruby, 2nd Member).

THE STUART MACHINERY CO., LTD.—Machinery.

TELFER BROS.—(F. H. Telfer, 2nd Member).

TILDEN GURNEY & CO., LTD.—Stoves, Scales.

WATEROUS ENGINE WORKS CO., LTD.—(Geo. W. Erb, 4th Member).

THE LONDON BANQUET.

The banquet given by the London members of the Canadian Manufacturers' Association in the Tecumseh House, London, on the evening of Friday, February 9th, was a most successful and enjoyable affair. Nearly one hundred guests were present, including most of the prominent manufacturers of the city, as well as a number of visitors from Toronto, Woodstock, St. Mary's, Goderich and other points.

Mr. T. H. Smallman presided and proved an excellent toastmaster. Among the speakers of the evening were Mr.

G. N. Weeks, of London, who gave a stirring address in reply to the toast of Canada; Mr. R. J. Younge, of Toronto, who spoke at some length in response to the toast of "Our Association," instancing the watchful care with which the Association looked after the interests of its members; Hon. Adam Beck, of London, who responded to the toast of "Our Legislators," taking occasion to refer to the power development work at Niagara, and its importance to the manufacturer; Mr. E. A. Du Vernet, of Toronto, who gave a thoughtful address on labor problems, coupled with some timely and practical suggestions regarding the policy which employers should follow; Mr. A. W. Fraser, London, who recounted briefly some of his experiences in connection with the manufacturers' trip to England; and Mayor Judd, of London, who fittingly replied to the toast of "Our City."

During the evening solos were rendered by Lieut-Col. Gartshore and Mr. Oliver Gelinás, while Mr. Frank Lawson and J. A. Cottam gave recitations which were well received.

Much credit for the success of the evening is due to the work of the enterprising Committee which consisted of Mr. T. H. Smallman, Lieut-Col. Gartshore, and Messrs. A. W. Fraser, W. C. Allen, A. W. White, John Cottam, John E. Smallman, Warren Thompson, E. Rechnitzer, Frank Lawson and H. T. Reason.

THE WINNIPEG BANQUET.

"There is only one way to make Canada great, and that is to go along the lines of protection of Canadian industries. Let your manufacturing be done by Canadian manufacturers and let the Canadian farmer feed the workmen."

So said Mr. W. H. Conger, an ex-Senator of Nebraska, at the banquet of the Manitoba Branch of the Canadian Manufacturers' Association, held on February 13th last, and in so saying he struck the keynote to the sentiment pervading one of the most enthusiastic gatherings ever held in Winnipeg. Mr. Conger, who is now a naturalized British subject and a resident of Edmonton, gave an interesting review of the protection movement in the United States, and how the country had prospered under such fiscal conditions.

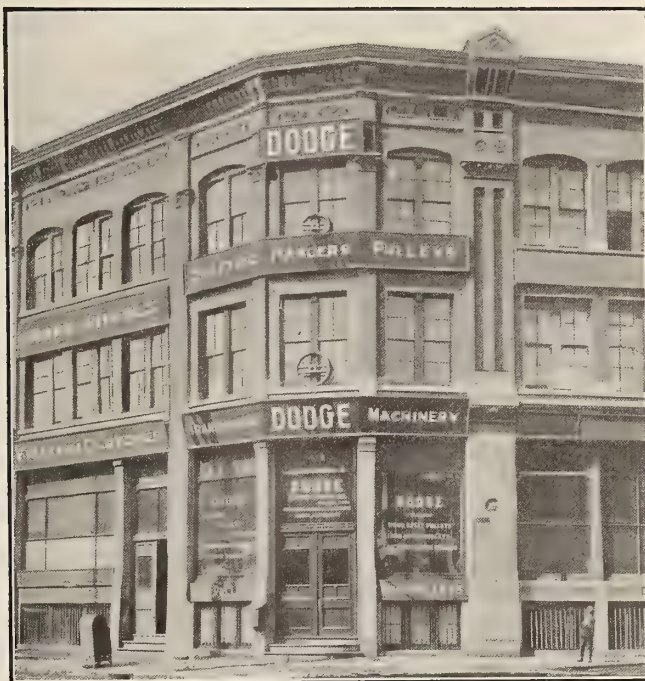
Mr. E. L. Drewry, Chairman of the Manitoba Branch, presided at the head table. Before him were seated one hundred and twenty of the leading manufacturers and business men of the Middle West. The spread was a most appetizing one, and splendidly served, the menu consisting almost entirely of delicacies "made in Canada."

Mr. Conger's rousing speech was the feature of the evening, yet it was scarcely followed with more sympathetic interest than that of Mr. W. Sanford Evans, whose theme was "Our National Industries." Mr. Evans referred more particularly to the growing importance of Winnipeg as a manufacturing centre. In the census year Winnipeg stood fifth in the list of manufacturing centres as regards output.

Ex-Mayor Andrews replied to the toast of "Provincial and Civic Governments." That of "Manitoba Industries" was ably proposed by Mr. L. C. McIntyre and responded to by Mr. D. C. Cameron and Mr. T. R. Deacon. Mr. Cameron spoke of the possibilities of developing the paper-making industry among the spruce forests in the neighborhood of the water powers of the Winnipeg River, while Mr. Deacon dwelt upon the importance of those water powers in working up other raw materials to be found through the West.

The Committee responsible for the success of the evening were Messrs. L. C. McIntyre, E. L. Drewry, T. R. Deacon, Hugh C. MacLean, D. J. Dyson, R. W. Patterson, W. J. Boyd, W. J. Bulman and A. D. Campbell.

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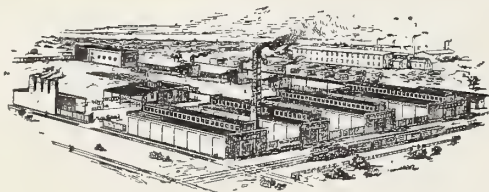
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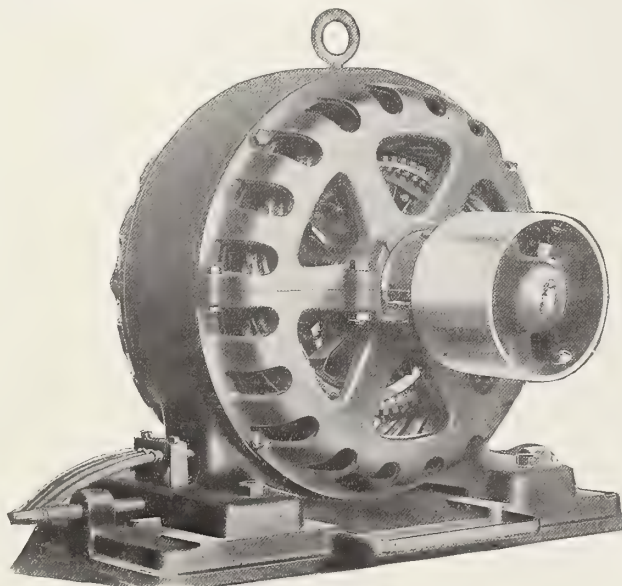
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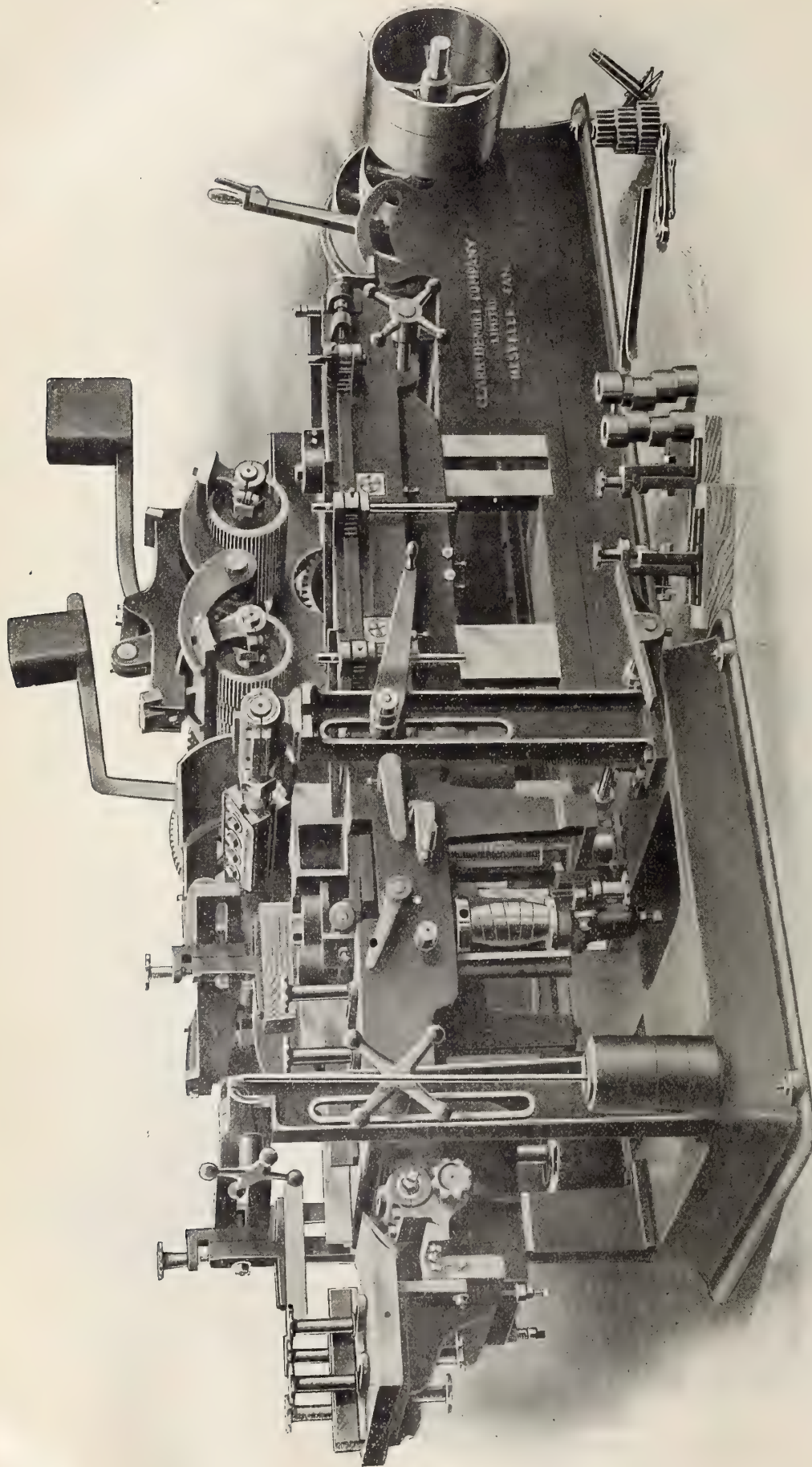
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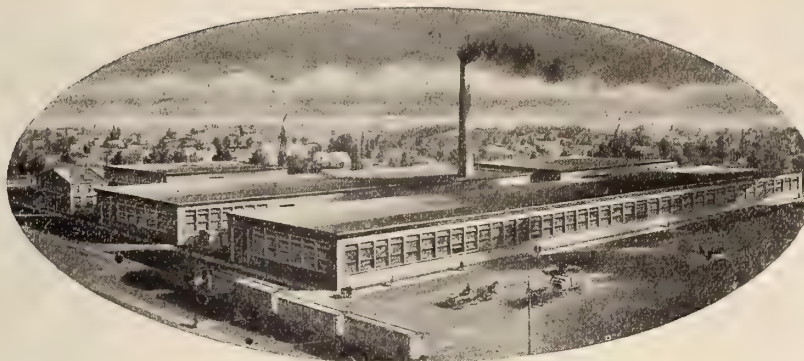
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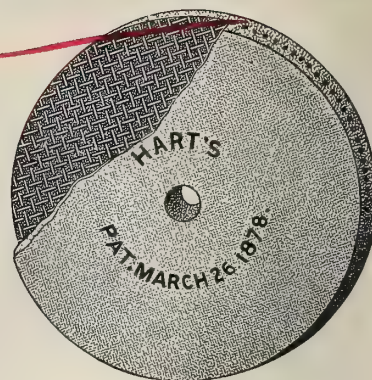
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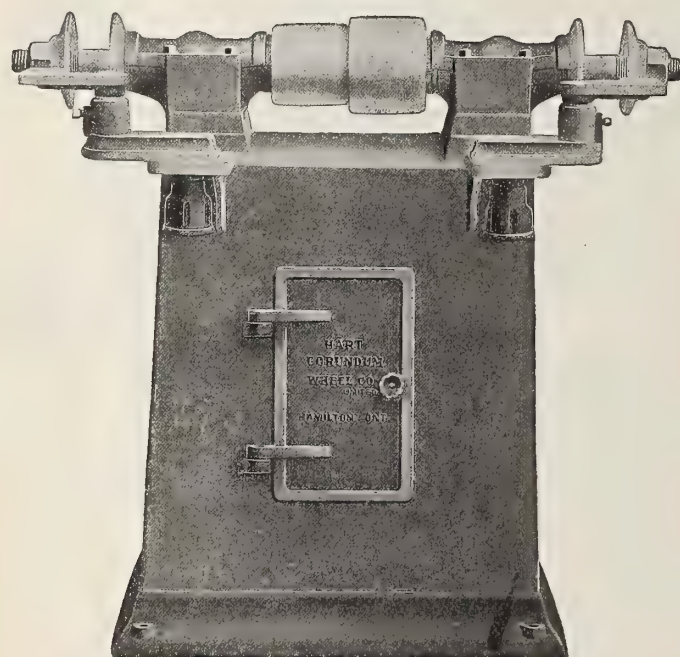
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Length of crucible steel arbor	-	-	42 inches
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Size of cone pulley on arbor	-	-	5 and 6 x 4½ "
Diameter of collars	-	-	6 "
Height from floor to centre of arbor	-	-	35 "
Size of base	-	-	23 x 27 "

Countershaft has cone pulleys 15 x 16 x 4½ inches face.

Tight and loose pulley, 8 in. diameter, 5 in. face, and should run about 650 revs. per minute.

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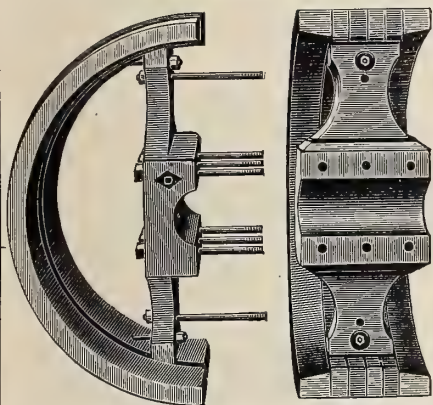


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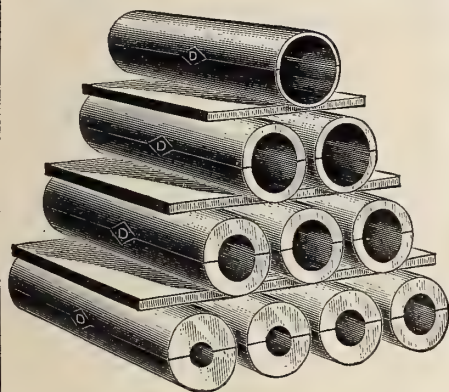
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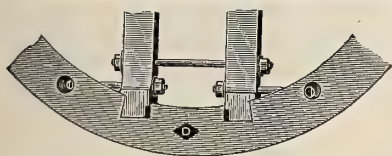
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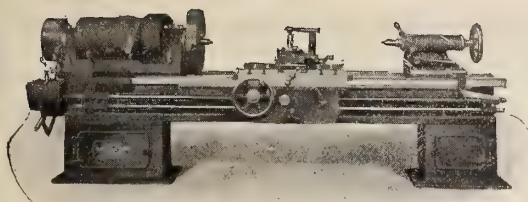


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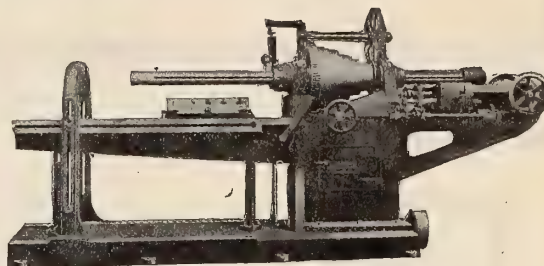
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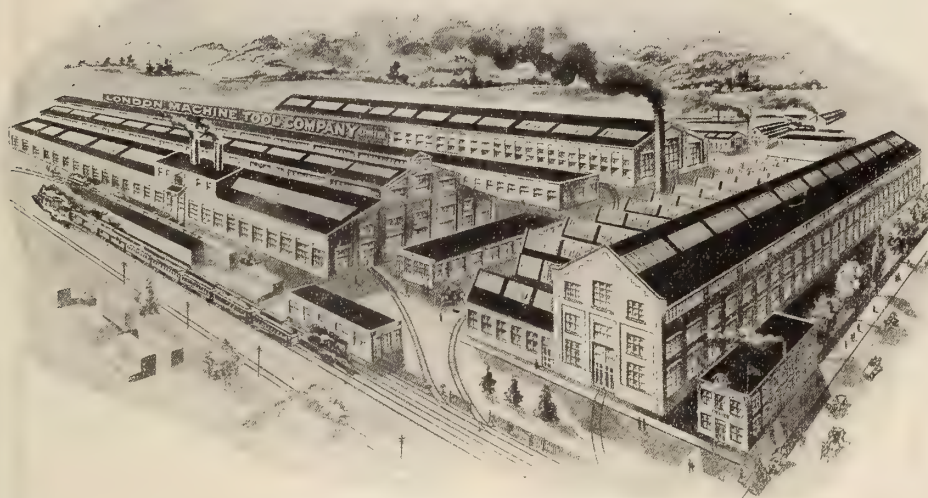
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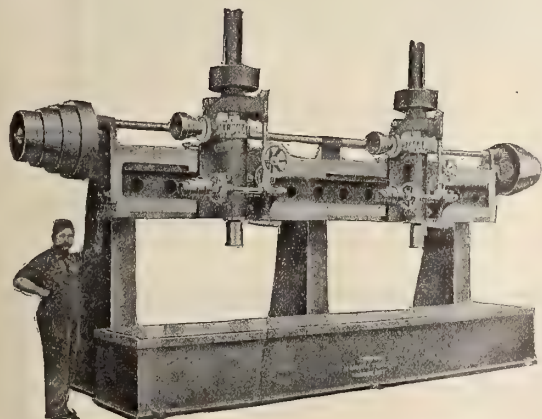
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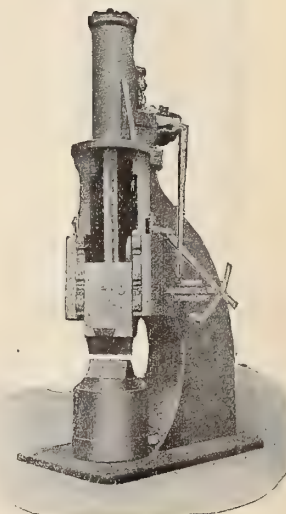
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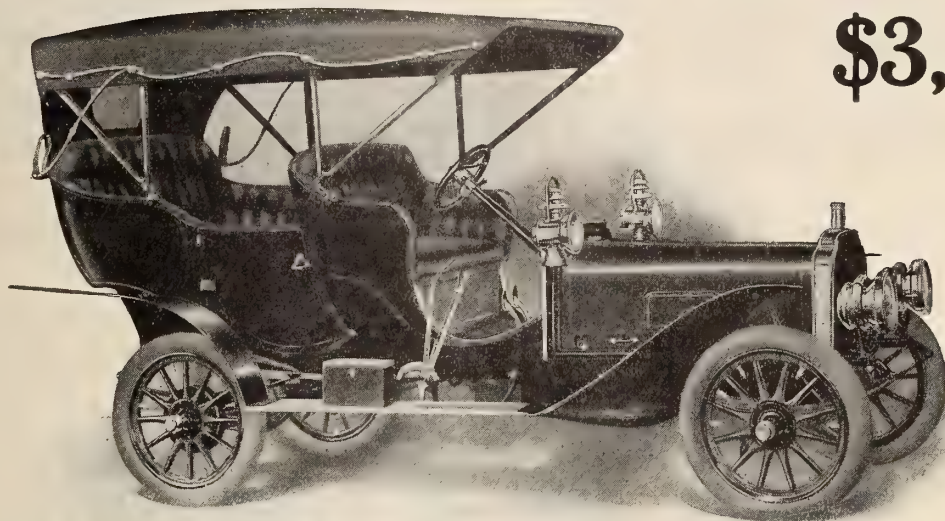
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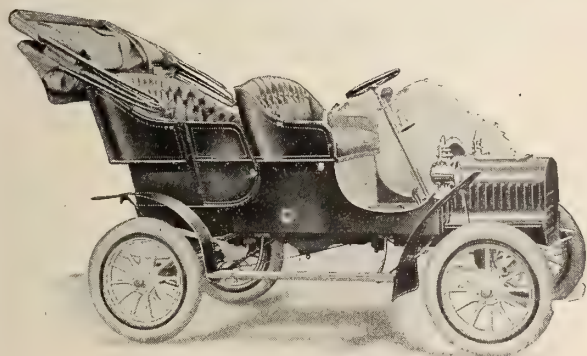
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"MODEL K" is a luxurious touring car with a world of *reserve power*, with speed to meet every requirement, with an engine so simple, so smooth in its operation, that the presence of a motor on the car could almost be questioned. A car that is the growth of a lifetime of study and practical development in automobile construction.

There is no feature in this car that has not been *worked out*. There is no danger from experiments. They are radical features but they are *proven features*, backed up not only by the best mechanical views, but by *actual experiences*.

Model C, \$1,100.



A practical family car. Carries comfortably four people. The power of the motor is sufficient to drive the car *on the high speed* up all ordinary hills.

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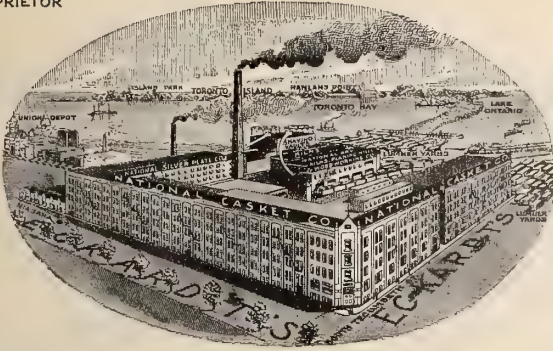
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Toronto, Ont., Canada. Feb 5 1906. 190

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A PAPER OF INFLUENCE

An Eminent King's Counsel Expresses His Opinion of Canada's National Newspaper.

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 "There is a paper known as The Toronto Globe, a paper known to everybody in this country. It has an enormous circulation throughout the length and breadth of the civilised world. It has an enormous influence; it is a paper which at least one-half of the grown individuals in this country desire to see, and upon which a very large proportion pin their faith. So influential was it that some of the Reformers said, instead of 'Give us this day our daily bread,' 'Give us this day our daily Globe.'"

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Incorporated.

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Vol. VI.

TORONTO, MAY, 1906.

No. 10.

INDUSTRIAL CANADA

Issued monthly as the the official publication of the Canadian Manufacturers' Association (Incorporated), and devoted to the advancement of the industrial and commercial prosperity of Canada.

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REPORT OF WATER-POWER COMMISSION.

PERMANENT interest attaches to the report of the Municipal Water-power Commission, which we publish in full in the present issue of INDUSTRIAL CANADA. The users of power, not only in Western Ontario, which is the particular field of the Commission's enquiry, but in every place where power may be developed by water, are under great obligations to the Commissioners, for the thoroughness with which they have pursued their work and the completeness with which they have treated every imaginable phase of the subject.

In a country endowed with tremendous resources, such as we possess, the power problem is one of vital importance. As is pointed out in the report, it was the presence of coal contiguous to the iron, in England, which made her immense industrial development possible. But Canada has something which is far better than coal. Recent advances in electrical engineering have clearly demonstrated the advantage of hydro-electric power over power derived from coal. The waterfall, not the coal mine, promises to furnish the motive power of the future, and Canada with her extensive system of waterfalls is, therefore, most advantageously placed in the industrial race which is now being run.

It is, perhaps, not unfitting that that mightiest of all waters, Niagara Falls, should be the subject of the first exhaustive report to be prepared on the development and transmission of hydro-electric power in Canada. It may fairly be assumed that all future investigations will be based upon the general principles laid down therein, and that even in the working out of minor details this report will serve as a model for all other commissions appointed for a similar purpose in any part of the country.

The report itself, drawn up by the five Commissioners, Mr. E. W. B. Snider, chairman, Mr. P. W. Ellis, Hon. Adam Beck, Mr. W. F. Cockshutt and Professor R. A. Fessenden, is an admirable document. Although it deals with a subject which contains much that is technical and much that is statistical, it is written in a style which is both lucid and convincing. The voluminous details comprising the special reports of Professor R. A. Fessenden, and the hydraulic engineers, Messrs. Ross and Holgate, have been thoroughly digested and the results are given in opinions which, while they are succinct and definite, are at the same time thorough and exhaustive.

The matter of the report furnishes much food for thought on the part of public-minded citizens. The special investigations by the engineers place figures at the disposal of the reader, which cover the entire cost of generating and transmitting power, from the original hydraulic development to the time the power is received by the individual consumer, so that contracts could immediately be awarded and work commenced on the basis outlined. Every possible contingency seems to have been provided for—in fact, so liberal has been the allowance for contingencies that the cost of construction might reasonably be expected to fall well within the estimates. The same conservatism applies to the estimates of revenue, which under ordinary circumstances would be largely in excess of the figures shown. The report, therefore, is doubly valuable; first, because the figures therein compiled are absolutely reliable as representing the situation in its most unfavorable aspect, and second because the possibilities in the way of cheap power to which it unmistakably points are little short of phenomenal.

Again, the discussion by Professor Fessenden on the municipal ownership of public utilities is one of outstanding importance. His opinions on this subject are based on engineering considerations; he does not pretend to consider

Additional copies of the present number of "Industrial Canada," containing the complete text of the Report of the Ontario Power Commission, may be had for twenty-five cents.—Address "Industrial Canada," 123 Bay St., Toronto.

the reason for or against, which political or other interests might introduce. He simply propounds the question, would municipally controlled plants, from an engineering standpoint, be economically managed, and would the best results be attained in the matter if improved processes. His conclusions are in all cases convincing.

In the twelve other special articles by Prof. Fessenden the subject of hydraulic power is approached from every standpoint. The objections raised by those who oppose power development at the Falls, for fear of interfering with their scenic beauty, are met with a statement of the almost limitless value of them industrially. Furthermore, until they are developed to a far greater extent than is now proposed, there is small danger of any serious injury being done.

Anything like a summary of the report would be far from satisfying. The finding of the Commission is as concise as the facts will permit, and any abridgment of it would fail in a proper presentment of the question. We recommend it, in its entirety, to the careful study of all users of power. It will well repay a close perusal.

CANADA'S OPPORTUNITY.

A FIELD for the development of an active export trade is to be found in the awakening of China and the opening up of Japan to industrial enterprise. The present is particularly opportune for Canada to get a foothold and establish herself in a firm position in the Orient. The Chinese boycott of American goods, which has been taken as a passing whim, is still making itself felt, as is evidenced in the orders which have been coming to British Columbia firms of late for flour and lumber. Supplies of these commodities were formerly bought exclusively from the United States.

This is Canada's opportunity. Our steamship lines hold a shorter route to Japan than from any American port. Hence we are placed in an advantageous position from the beginning. In quality, too, we need fear no comparison. Our flour and lumber are unequalled across the line. All that we need is a chance to prove this by sending over sample shipments. The Chinese refusal to buy from the United States provides us with the opening which we are after. The mode of life of the people of Asia is changing. They are turning from their old diet of rice to one of wheaten flour. Moreover, the great increase in building and in railway construction will call for a greater supply of timber than ever before. These are the very two products which we are able to supply best. A satisfactory entry into these markets should be possible now.

Nor should our activities be confined to these two natural products. China and Japan import immense quantities of manufactured goods annually. Having secured an entry into their markets by means of our flour and lumber we should go after the business in other lines, which is now going to other countries. In the case of China, her friction with the United States will probably soon pass away. Before it does so the products of our factories should find their way across the ocean and the people over there should be so familiar with them that there would be no question of our losing the trade.

Already a beginning has been made by Canada. In 1904 we sold to China and Japan, goods to the value of \$568,983. In 1905 this sum was increased to \$1,520,053. Small as these sales may be when compared with the total purchases of the Asiatic countries, they still go to show that we are producing goods which these people want and that we can sell

them in competition with other nations. The market of four or five hundred millions of people who are just awakening to the need of western manufactures is worthy of close attention. The contest will not be to see who will get the business which now exists, great as it is, but each year will see the total climbing up by millions. The Orient in the future will be a market which must be reckoned with.

AN EXPORT DUTY ON PULP-WOOD.

WHETHER it be mining or fishing, lumbering or farming, the great question for Canadians is how to make these operations do the most good to the country at large. In the case of lumbering we have long been losing much of the benefit which should accrue to us from our great natural resources. We have been satisfied to take the pay for cutting the timber and hauling it down to the river—in short for doing the roughest of the work—while the highly skilled labor, the labor which commands good pay and supports a prosperous class of citizens, is done in the United States.

This is not as it should be. There is no excuse for Canada losing any of the benefits that flow from the establishment of good working industries. She has natural resources which must supply the continent before long, for the forests of the United States are rapidly becoming depleted. Having the key to the situation in her own hands it is senseless extravagance to hand over this great treasure vault to the people of other countries that it may redound to their material welfare, while she herself is satisfied with the bare beginnings of it.

The United States, whose consumption of pulp and paper per head of population is greater than that of any other country in the world, is year by year becoming more dependent upon Canada for her supply of pulp-wood, and indirectly, for her pulp and paper. Here, surely is a natural market which Canada should not fail to take full advantage of. And yet, the United States import duty of \$2.00 a ton on ground wood pulp and \$4.00 a ton on sulphite pulp, acts as an effectual barrier to the product of the Canadian pulp mill. By means of this duty the United States manufacturer is left in undisturbed possession of the greatest pulp market in the world, while his Canadian competitor, who supplies him with a large part of his raw material, finds his own home market, at best a limited one, demoralized by the sale of the surplus products of United States mills at slaughter prices.

This state of affairs seems the more deplorable when we reflect that Canada is herself placing in the hands of the United States manufacturers the weapons with which they attack her. Striking evidence of this fact was furnished only last winter, when on account of the lightness of the snow-fall, logging operations in the Maine forests had to be suspended. A number of the New England mills were at that time compelled to draw their entire supply of logs from Canada. In 1905 over \$2,600,000 worth of pulp-wood left this country to be manufactured into pulp in United States mills. Apparently it is the very abundance of our heritage which makes us so reckless in the disposal of it!

Surely the time has come for Canada to shake off this lethargy, to arouse herself to a realization of the folly of her present policy. The remedy for the present unfavorable conditions is simple. Dominion legislation restricting or prohibiting the exportation of pulp-wood would raise up an industry in this country which would count for much in our industrial prosperity. The result would be the establishment in Canada of branches of manufacturing plants which have

grown to great magnitude in the United States at our expense. There is no question or doubt about it; if the owners of pulp mills in the United States could not get pulp-wood wherewith to run their plants they would promptly move those mills to a place where they could get unlimited supplies. That is the matter in a nut-shell.

It is sincerely to be hoped that the Federal Government will give this matter prompt consideration. Few countries are fortunate enough to have a preponderating supply of any raw material and at the same time have the facilities for turning it into manufactured goods. Yet this is pre-eminently the case with Canada. Not only has she an almost unlimited supply of pulp-wood, but she has the immense water-powers which are essential to the economic production of pulp and paper. If we do not take advantage of these resources our natural wealth will have been given to us to little purpose.

THE PROTECTION OF CREDITORS.

LOSSES resulting from assignments, whether fraudulent or not, could be decreased greatly by co-operation among manufacturers and wholesalers. There is no doubt about the continual occurrence of unfair failures. A premium has been put upon this by the general immunity from prosecution of suspicious bankrupts. As a matter of fact it is usually not worth any individual creditor's while to invoke the law and go to the expense of collecting evidence of fraud. He is apt to hesitate before taking action against a man who may be in business again in a few months. Consequently, if a merchant has wanted to defraud his creditors he has usually been able to do so without bringing down on his head any punishment from the law. Cases such as the recent one in St. Thomas, where a vigorous prosecution was carried on successfully by an individual wholesale firm, are rare exceptions.

The reasons which make it inadvisable, in most cases, for any one person to prosecute, have no weight when applied to an association. The regular staff of the latter can handle the work without causing unnecessary waste of time. A single suit can be entered covering all claims, and the utmost economy secured. The personal element is minimized and all creditors are placed on an equal footing. By co-operation the cost to the individual of carrying on the work of investigation or prosecution would be small.

The direct benefits which can be derived from an association are briefly these. Where a man fails and there is a suspicion of fraud the solicitors of the association can make a thorough investigation of the facts. They can do this the more readily, because, in the first place they have the general funds to work with, they are acting for several who are affected by the same failure, and within the association itself they can get extensive information regarding the bankrupt's previous dealings. Then, if on careful examination the suspicion of fraud is confirmed, prosecution follows with a surety which it would not have if each creditor was acting for himself alone.

Then there is the possibility of pursuing a consistent policy in dealing with bankruptcy cases. It will be no small advantage to have it recognized that every case of failure will be scrutinized closely by an impersonal body, which will not be affected by reason of past favors or future business. As the possibility of escaping detection in false assignments grows less, the number who will attempt it will become smaller and the loss from such causes and the cost of the association will both rapidly decrease.

It is only reasonable to assume that the majority of failures are perfectly honest. In these cases, too, an associ-

ation has scope for effective work. The object should be to conserve the assets, and where the assignment has been brought about by some temporary embarrassment, to give the debtor an opportunity of recovering his business. Sometimes the excessive haste of a single creditor will bring about a suspension of business, where it would be much wiser to have it continued. Frequently when it is necessary to sell a stock insufficient notice of sale is given and the creditors lose. Thus an association dealing with honest debtors would be a strength to both debtors and creditors.

By co-operation, then, the following objects (not to the exclusion of others) could be attained economically:—The prosecution of fraudulent debtors; collections from and settlements with honest debtors; collection of information for use in extending credit; good legislation on commercial matters. The Merchants' Protective Association, of New York, has been doing successful work along these lines for some time, and there are a number of other organizations pursuing similar policies. They have accomplished by means of small individual fees a work which would have cost any single creditor a large sum. The subject is one that Canadian manufacturers and merchants should study carefully. For instance, would not the boot and shoe, furniture and other manufacturers receive much benefit from insolvency protective organizations in their respective lines of business?

THE FARM IMPLEMENT TRADE.

THE farm implement trade in Western Canada during the present year promises to dwarf anything which has preceded it. The large number of settlers who are advancing in a stream to the fertile plains of the West, need a great quantity of implements wherewith to carry on the operations of the farm. Already there has been an increase of from 50 to 150 per cent. over the business done a year ago. At the rate immigrants are going in this increase should steadily grow.

The influence of this Western trade is far-reaching. It makes possible the construction of the great net-work of railways which is now being spread over the prairies. The railways, besides drawing heavily upon the natural resources and the manufactures of the East, in their building, encourage the growth of towns and the consequent springing up of industries. These in turn supply ready markets for an increasing quantity of the farmers' produce.

The farm implement trade may well be considered an index to the prosperity of Canada. Its growth coincides with the development of the portion of our country which admits of almost unlimited expansion. If the sale of farm implements is doubled in a year it means that there is a proportionate increase in the number of tillers of the soil. This represents just so much additional wealth to the country, so much additional produce for supplying to the nations of the world with the consequent returns to us, so many more consumers of manufactured goods, and hence so great an increase in our industrial population. Canadians may look with the utmost satisfaction on this phase of the business outlook.

In connection with this Western development it is interesting to note that in ten days, early in the season, 334 carloads of settlers' effects were received by the C. P. R. Company from the American side, and during the same time 182 carloads from Eastern Canada were handled at Fort William. This makes an average of 53 carloads of new settlers' belongings going into Western Canada daily. When to the number of farmers represented by these figures are added the business and professional men and artisans who will follow them, the prospective increase for the year becomes truly great.

NEED OF CANADIAN MANUFACTURES

Hon. Jas. McMullen Discusses the Right Canadian Policy Towards Manufactures. Protection is Essential to Our Industrial Development.

To the Editor,—Permit me through the columns of INDUSTRIAL CANADA to bring under the notice of your readers some facts in connection with our rapid development and our trade relations with other nations.

Canada is rapidly rushing to the front as an enterprising, productive country, and should carefully lay the foundations of her bright prospective future on lines that will contribute to increased population and a gradual expansion in all desirable avenues of industry in which we can fairly hope to succeed.

If Canada is to become a self-reliant nation she must at least develop in not less than five lines of industry, namely: Agriculture, manufacturing, mining, lumbering and fishing. These different lines must go hand in hand, mutually helpful to each other.

The average custom taxation in Canada is about \$7.00 per capita of our population and it matters little to the average resident whether he pays that tax on his hat or his boots, or partly on each. If the linen in the bosom of a shirt which comes from the British Isles is put on the free list, and the duty now collected thereon is added to the present duty on the cotton in the body, as long as the shirt is sold at the old price it makes no difference to the wearer. If the ordinary delf and stoneware which is used on the tables of the rich and poor alike and which comes from England and cannot be manufactured here, because we have not the raw material of the quality necessary to enable us to produce it, is put on the free list when produced within the Empire, and the revenue now collected thereon added to the woollen goods on lines used almost in every home in order to give the woollen men a helping hand, so long as the tax per capita is not increased above the present rate already stated, what difference does it make to the average tax-payer?

Make Goods in Canada.

This is the kind of re-adjustment of the tariff that I would advocate under present conditions. Our tariff should be so arranged as to tax as lightly as revenue necessities will permit, everything that comes to us within the Empire that we cannot reasonably hope to produce ourselves; for since the passage of the McKinley bill, followed by the Dingley bill, Canada has been largely closed out of the United States as far as selling is concerned, and we have purchased about 150 millions of all kinds of products, including manufactured goods, from them yearly, about half of which is virtually raw material and about 84 millions manufactured goods, one-half of which is labor. This means that we Canadians have about 56,000 mechanics in the United States working for us every day, earning an average wage of \$2.50 per day or \$750 annually, and if each mechanic is the head of a home we are supporting 56,000 homes or a population of 280,000 people, which would make a city virtually larger than Toronto, all working to supply Canadian wants and at the same time consuming American products and wearing American goods.

Would it not be good statesmanship to get these people over here to manufacture what we want and let us supply their every day wants with Canadian products and have them occupy 56,000 Canadian homes? We are glad to have American farmers come to our North-West to become citizens of

Canada, and we are supporting immigration agents at considerable cost in the United States to induce these people to come to our side of the line. Why not adjust our tariff and spend a little money in that way to bring the mechanics here also? It is the only remedy for the McKinley bill and the Dingley bill.

A Concrete Example.

The Americans are the shrewdest statesmen on earth. If they had the making of England's policy they would make it what it is: free trade, because it gives them free and unrestricted access to the English market for everything they have to sell. If England had the making of the United States policy, would they make it what it is to-day? Certainly not, they would make it on free trade lines. There is no nation on earth that has made the rapid development the United States has made in the last forty years. Her manufactured goods are successfully competing with English products in every civilized country. She keeps her home market largely for herself and she successfully competes in foreign markets with other nations.

It is not a desirable trade relation with any outside nation to pay to them annually 100 millions in cash as a balance of trade against us. Yet we are doing this every year with the United States. Raw material we must have. This we shall secure on the best terms possible; even if we have to pay in gold for it, our people must have it. But manufactured products, a very large portion of the value of which is labor, we should by all means aim at producing within our own bounds. Some leading trade journals have ridiculed the balance of trade principle and have gone so far as to say: "Nobody sees the gold pouring out of Canada into the United States." The ostrich folly of shutting our eyes and sticking our heads in the sand and concluding that all is right, is national imbecility. Are all the statesmen of Germany, of France and of the United States national fools, and are the only shrewd statesmen that the world contains to be found in the British Isles?

The difference between British statesmen and American statesmen is this: The British are all theorists and follow a policy; the Americans are statesmen by hard experience and they put in practice what they learn. We cannot do better than take a lesson out of their book and in many lines follow their example.

I venture to predict that England will yet open her eyes to the folly of free trade under present conditions. If she could get the world to adopt free trade with her it would be all right, but the attitude of foreign nations which protect their own home industries and shut her out of their markets will eventually bring her to see her true attitude, and Chamberlain's policy as a remedy—and the only remedy—will be adopted.

Yours faithfully,

JAS. McMULLEN.

A company has been organized in Galt to manufacture furniture. A building has already been secured at a reasonable rental, and it is expected that operations will begin at an early date.

MANUFACTURERS' BANQUET AT TORONTO.

Hon. Rodolphe Lemieux and Mr. R. J. Younge Honored by the C. M. A.

MEMBERS of the Toronto branch of the Canadian Manufacturers' Association, with guests from many other industrial centres on April 19 banqueted Hon. Rodolphe Lemieux, Solicitor General of Canada, and Mr. R. J. Younge, who recently resigned the secretaryship of the Association to join the staff of the Canadian Rubber Company. The attendance was large and the dinner was highly enjoyable, alike for the good cheer set before the company, the fine musical programme, rendered by Mr. Hahn, 'cellist, and the excellent speeches.

Mr. W. B. Tyndall occupied the chair, and among those who sat at the guests' table were: Hon. Mr. Lemieux, Mr. R. J. Younge; Hon. G. W. Ross; W. K. McNaught; C. C. Ballantyne, Montreal; W. K. George, Geo. E. Amyot, Quebec; Harry Cockshutt, Brantford; W. S. Fisher, New Brunswick; Major Geo. Stephens, M.P.P., Montreal; G. A. Vandy, Quebec; J. Lavoie, M.P.P., Montreal; Geo. Booth; Lloyd Harris, Brantford. Fixed toasts were dispensed with, with the exception of one to the King.

Hon. Mr. Lemieux was greeted with great applause when he rose to speak. Many of those present were at the meeting in Quebec last September, when the same gifted orator stirred the enthusiasm of his audience by his eloquent and patriotic words. Those who had not heard him were familiar with his reputation as a speaker. Nor were they disappointed. Seldom has a Toronto audience listened to a speech marked by such felicity of phrase and beauty of diction. He spoke of the strength of the union between the two nationalities who inhabited Canada, each great, each contributing much to the general progress of civilization.

"We are building up our country," he said. "The foundations, strong and deep, have been laid many years ago by men of stern and unbending courage, by patriots of lofty ideals. The superstructure must correspond to the foundations, and our generation will be responsible before the tribunal of history for its solidity and its beauty."

His remarks on Canada's right policy in the protection of industries and her independence of the United States for her commercial prosperity met with great favor. "We have," he said, "to the south of us, across the frontier a great, and, I hope, a friendly, neighbor. We do not envy her mighty achievements—they are for us a subject of emulation. During a long and chequered period of our history, when our young men were streaming across the frontier and settling, some in the border States, others in the Western prairies, it was predicted that some day, perhaps, the Dominion might be absorbed by the Republic. It was also mooted at Washington that a strong and tenacious policy excluding our products from the American markets would bring us to terms. But, thank heaven! we have crossed the bar safely."

"We have also ceased to look to Washington for the solution of a vexed fiscal problem; we have boldly created new channels for the expansion of our trade; we have given

a preference to the Mother Country, thus spanning the Atlantic with our convoys of Canadian products.

"If we remain true to ourselves, if we know how to learn from the Americans a lesson which they have been only too prone to teach us, we will give our Canadian farmers a home market that can always be depended upon, without the uncertainties of a fluctuating foreign market."

The presentation to Mr. R. J. Younge shared in importance with the speech of the Solicitor-General. Mr. C. C. Ballantyne, President of the Canadian Manufacturers' Association, expressed the esteem in which the former secretary was held, and the regret with which all the members viewed his departure. It was due in no small measure to his immense organizing ability and indefatigable energy that the Association had attained to its present size and influence. An increase in membership during the four years of Mr. Younge's secretaryship, from about nine hundred to more

than two thousand, was just one example of the work he accomplished. Mr. Ballantyne spoke particularly of the success of the British excursion last year which he ascribed to the completeness of the arrangements, and the unfailing carefulness and courtesy of Mr. Younge. He then, on behalf of the Association, read an illuminated address which he presented, with a gold watch and chain, suitably engraved, to Mr. Younge. The address read as follows:—

To Mr. R. J. Younge,—The Executive Council and members of the Canadian Manufacturers' Association, in whose service you have labored so faithfully during the past four years, have accepted your resignation with the deepest regret. In you they have possessed an officer who was not only thoroughly efficient and unselfishly devoted to their interests, but one whose thoughtful consideration, whose unfailing courtesy, and whose rare good fellowship

have won their warmest affection and esteem. Your departure from the counsels of the Association is, therefore, regarded as a distinct loss.

And yet they have realized that, to one of your marked ability, the service of the Association must soon cease to be attractive. They have felt that your peculiar genius and adaptability had marked you out for a high place in the commercial world. Now that the opportunity has arrived which seems to offer due scope to those qualifications which have enabled you to prosecute your work for this Association with such success, they take pleasure in acknowledging their indebtedness for services rendered, and in testifying to the esteem in which they individually hold you.

During your tenure of office the Association has experienced a most remarkable development. The membership has increased from nine hundred and forty to two thousand and nine. Branch offices have been opened in Halifax and Quebec. Fifteen new sections have been formed in the interests of members in as many lines of trade. A transportation department has been organized, and has rendered invaluable services to shippers in every part of Canada. More recently, an insurance department has been established,



HON. RODOLPHE LEMIEUX,
Solicitor-General of Canada

with a view to alleviating the excessive burdens of the insurance tax. Much of this growth can be directly traced to your business sagacity and indefatigable energy, and it is with pleasure that we record our appreciation of the same.

We also refer with particular pride to two notable undertakings which are inseparably connected with your term of office, and which were carried through to a successful issue, largely as a result of your untiring efforts, the excursion to the Pacific Coast in 1903, and the excursion to Great Britain in 1905. Each of these has played its part in strengthening Canada's commercial relations, the one internally and the other externally. The latter, however, has done more. It has enunciated in unmistakable terms the attitude of the Canadian manufacturer towards the question of Imperial preferential trade, and has made clear to the British mind the only plan by which that desideratum can be accomplished. And accomplished it will be, we verily believe, but long ere then this excursion will have taken rank in history as a memorable event, pointing the way to the commercial unification of the greatest Empire the world has ever known. The satisfaction of having actively participated in work which has resulted in such lasting good, both to Canada and the Empire, must ever be your greatest reward.

As a token of our appreciation of the valuable services you have rendered in promoting the interests of Canada and her manufacturing industries, we would ask you to accept this address and the accompanying gift. With them, we offer you our best wishes for success and prosperity in your new field of labor, and sincerely trust that we may long be privileged to enjoy your friendship and co-operation in the work of the Association.

Signed on behalf of the Association,

C. C. BALLANTYNE, President.
GEO. BOOTH, Treasurer.
J. F. M. STEWART, Secretary.

In his reply Mr. Younge, after expressing thanks to the members of the Association for their unfailing loyalty and kindness, spoke of the work of the Association, characterizing it as national and unselfish in its objects. The upbuilding of a prosperous people, rather than personal advantage, had ever been its goal. The manufacturers recognized that in the welfare of the whole country lay the welfare of the individual. He criticized strongly those who would set class against class and try to stir up friction between manufacturers and farmers.

The others who spoke were Hon. G. W. Ross, Mr. Geo. E. Amyot, and Mr. Harry Cockshutt.

CLASSIFICATION CHANGES.

A SUPPLEMENT to the Canadian Freight Classification which went into effect on the 17th of April contains some changes of interest to the shipping community. These changes were brought about by the complaint of the Canadian Manufacturers' Association to the Board of Railway Commissioners with regard to the rules of the classification.

Minimum Weights.

Shippers of goods which are not readily accommodated in the standard box car of 36 ft. 6 in. length will be pleased to learn that a further modification has been made in the

minimum carload weights when cars over that length are required to accommodate their traffic. The revised table of minimum weights for long cars is inserted below:—

		Where the Minimum Carload weight in Classification for Cars not over 36 feet in length.					
For Cars over ft. in.	and not over ft. in.	Is 10,000 lbs.	Is 12,000 lbs.	Is 14,000 lbs.	Is 16,000 lbs.	Is 18,000 lbs.	Is 20,000 lbs.
		Min. weight will be	Min. weight will be	Min. weight will be	Min. weight will be	Min. weight will be	Min. weight will be
		Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
36 6	40 6	12,000	14,500	17,000	19,000	21,500	24,000
40 6	41 6	12,500	15,500	18,000	20,000	22,500	25,000
41 6	42 6	13,500	16,000	19,000	21,000	23,500	26,000
42 6	43 6	14,000	17,000	20,000	21,500	24,500	27,000
43 6	44 6	15,000	18,000	21,000	22,500	25,000	28,000
44 6	45 6	15,500	19,000	22,000	23,000	26,000	29,000
45 6	46 6	16,500	20,000	23,000	24,000	27,000	30,000
46 6	47 6	17,000	20,500	24,000	25,000	28,000	31,000
47 6	48 6	18,000	21,500	25,000	25,500	29,000	32,000
48 6	49 6	18,500	22,500	26,000	26,500	29,500	33,000
49 6	50 6	19,500	23,500	27,000	27,000	30,500	34,000

An idea of the reductions included in the above table may be had by taking a carload of furniture as an example: The minimum for a standard car of 36 ft. is 14,000 pounds. Heretofore, the minimum for a car 40 ft. 6 in. in length was 17,500 pounds. It is now 17,000 pounds. A car of 42 ft. 6 in., formerly 20,000 pounds is reduced to 19,000 pounds, and a car not over 45 ft. 6 in., formerly charged at a minimum weight of 23,000 pounds, will now be taken at a minimum weight of 22,000 pounds. A similar reduction applies to shipments of bicycles and other traffic taking the minimum weight of 10,000 pounds for the standard car. Formerly a car 40 ft. 6 in. long would be charged 12,500 pounds; it is now 12,000 pounds. A car 42 ft. 6 in. long, formerly 14,500 pounds, is now 13,500 pounds; and a car 45 ft. 6 in. in length, formerly 17,000 pounds, is by the supplement reduced to 15,500 pounds.

Mixed Carloads.

The extension of the mixed carload rule, so as to provide for shipment in mixed carloads of the products of various complaining factories as agreed to by the Canadian Manufacturers' Association with the Canadian Freight Association, is also included in this supplement.

Single Shipments on Flat Cars.

Rule No. 6 of the Classification, which formerly required that not less than 6,000 pounds at the first-class rate would be charged as a minimum for shipments of single articles on flat cars, has been amended by reducing the minimum weight to 5,000 pounds, with exceptions covering shipments of boilers, smoke stacks, shafting, beams, columns, girders, etc., at 4,000 pounds. The effect of this may be illustrated by taking a shipment of a boiler, weighing 4,000 pounds from London to Toronto. Under the old classification the charge would be 6,000 pounds at 36 cents per 100 pounds, or \$21.60. The change above mentioned makes the weight 4,000 pounds, and at 36 cents this would give a total charge of \$14.40, a difference of one-third in favor of the shipper.

Individual Changes.

There are a number of reductions in ratings for individual commodities, such as boats, cream separators, bees-wax and copying presses.

CANADIAN NICKEL INDUSTRY.

By A. B. WILLMOTT

WITH each new railway through northern Ontario some new mineral region is sure to be found. All are aware that the opening of the Temiscaming and Northern Ontario Railway resulted in the discovery of the rich silver-cobalt deposits of Temiscaming. It may not be so well known that it was the opening of the main line of the Canadian Pacific Railway that led to the discovery of the Sudbury nickel deposits in 1883. It is true that as far back as 1855, Murray had pointed out in the Geological Survey Reports, the presence of nickel on what is now known as the Creighton Mine. In the absence of transportation no attention was paid to his discovery, and the remarkable riches of this district lay dormant until the railway was opened.

Prospecting began in 1884 and the Stobie, Copper Cliff, and other properties were discovered. In 1885 Mr. S. J. Ritchie, of Akron, Ohio, visited the district and took up several properties. Early in 1886 the Canadian Copper Company was formed with a capital of two million dollars with the intention of operating several of the prospects as copper properties. It was not until the fall of that year that nickel was discovered in the first shipment which was made. It was then realized that the ore bodies were even more valuable as sources of nickel than of copper.

By April of 1902 the Canadian Copper Company had so grown that it was necessary to re-organize and consolidate. A new company known as the International Nickel Company, with a capitalization of thirty-four million dollars, was formed, and in this were included nickel properties in the Sudbury region, nickel properties in New Caledonia, and refining plants in New Jersey. This immense company is, however, only one among several nickel companies which have operated in the Sudbury region. In 1889 the Dominion Mineral Company operating the Blezard, and the Vivians operating the Murray began work; other companies started from time to time although all of them have not met with success. With some the ore bodies proved too small; with others mismanagement led to failure; all have had difficulties to overcome in finding a satisfactory means of treating their ores. In the early days the market was extremely limited, the world's consumption not being over 800 tons; now it is 10,000 tons and upwards. These days of stress, however, seem to have passed, and two at least of the nickel companies are now among the most successful mining concerns in Canada.

Area of Nickel Region.

The Sudbury nickel region is roughly an oval extending about thirty-six miles in a northeast and southwest direction, and about fifteen miles in a direction at right angles. Locally it is customary to speak of the North range and the South range, as the ends of the oval have no known ore bodies. The South range is well served by the main line and the "Soo" branch of the Canadian Pacific Railway, and more particularly by the Manitoulin & North Shore Rail-

way; this latter runs for 13 miles west from Sudbury, and a proposed extension to the waters of the Georgian Bay will be of great assistance to the region in opening new properties, and in bringing in coal and coke. The northern range is still unserved by railway facilities, and the nickel properties known to exist there are still unopened.

The nickel mines occur round the outer edge of an eruptive mass of gabbro or norite. This rock has been intruded into the older rocks, and now has the form of a saucer, with the Upper Huronian sediments lying within it, and the older Lower Huronian sediments and Laurentian eruptives lying below it. The ores are found along the contact between this eruptive norite and the underlying rocks. At the Creighton the contact is between the norite and a granite; at the Gertrude, between the norite and a diorite;



Roast Hears, Copper Cliff

at the Victoria, between the norite and a quartzite. In some manner not yet explained the ore bodies are connected in origin with this igneous intrusion.

A Rich Mine.

The most interesting property in the region, both from its size and exceptional richness, is the Creighton, belonging to the Canadian Copper Company, located about 12 miles west of Sudbury. It holds the distinction of being the largest nickel mine in the world, and is said to contain several million tons of high-grade nickel and copper ore running 6 per cent. or higher. The ore occurred on the surface of the ground, overlain only by a small thickness of gossan, a product due to the weathering of the ore. Mining is carried on in an immense open pit; the ore is loaded on cars which run on a track at the bottom of the pit, and is dumped into a skip through which it is hoisted to the surface. A second shaft is now being sunk which will double the capacity of the property and give it an output of about 1,500 tons per day.

At the Copper Cliff Mine, which has the distinction of being the deepest mine in Ontario, ore is now being raised

from a depth of 1,000 feet. The ore occurred in a chimney of considerable irregularity.

The Victoria Mine belonging to the Mond Nickel Company is another of the most active producers of high-grade nickel ore. At least 8 mines in the Sudbury region have produced over 100,000 tons of ore each, and two of them have gone over the 400,000 ton mark. There are, moreover, a number of properties already known on which no work beyond the exploratory stage has been undertaken, which can be counted on for future supplies.

Methods of Treatment.

After being mined, the ore is conveyed to the rock-house where it is crushed to pieces, 3 inches in diameter, screened, and passed over a picking table where any rock is taken out by hand. The ore is then transported by cars to the roast yards where the sulphur is partially removed. A layer of cord wood about 18 inches high is first built, and on this is piled the ore in a heap of one to four thousand tons; over



Creighton Mine, Open Pit—First Level.

the surface is spread the finer ore, and then the wood is set on fire. In this way the sulphur is largely burned off, and the resulting gases pass off into the air to the great detriment of surrounding vegetation. In Copper Cliff where the process has been carried on for years, all vegetation has been destroyed, even the grass having been absolutely killed. The same is true, although to a lesser extent at the roast yards of the Victoria Mine, and the Gertrude Mine. Roasting occupies from one to six months depending on the size of the pile.

Smelting the Ore.

From the roast yards the ore is taken by cars to the smelters where with coke fuel, it is reduced to ordinary matte. Six to ten tons of ore make one of matte carrying about 30 per cent. in combined nickel and copper. This ordinary matte is transferred to the bessemer converters, where air is blown through, the iron oxydized and slagged off, and the percentage of metal raised to about 80 per cent. This bessemer matter is unfortunately not treated further in Canada, but is shipped largely to the United States, and to a

smaller extent to Great Britain for refining. The International Nickel Company separate their nickel and copper by repeated fusions with sodium sulphate. The Mond Nickel Company effect the separation of the two metals by combining the nickel with carbonyl, which goes off as a gas and is afterwards condensed. The Lake Superior Power Company have been working on a process for separating the nickel and copper electrolytically at their works at Sault Ste. Marie.

Value of Metal.

The accompanying table shows the rapid progress which the nickel industry has made in the last twenty years. The Geological Survey report that up to the end of 1903, the total value of the nickel, copper, and other metals produced from Sudbury mines amounted to \$52,717,000.00. Adding to this the production for the last two years we have as the total value over 66 million dollars. The production in tons of ore to date, is about 2,575,000 tons. It is not generally known that besides nickel, and copper, very considerable values in the precious metals are recovered from these mines. To each ton of nickel there is said to be about 1.25 ounces of platinum and related metals; .37 ounces of gold; and 7.5 ounces of silver. In another table is given the world's production of nickel, from which it is seen that Canada is now the leading producer of this metal. In 1902 supremacy was wrested from New Caledonia, just as in 1905 supremacy in cobalt was wrested from the same island. With better facilities for mining, easier living, and better labor, to say nothing of the larger ore bodies, Ontario should always continue to lead.

Refining Plants.

To take care of this increasing production larger and better plants have been continually required. In the early days a considerable portion of the plant was naturally of an experimental character, and has been superseded by equipment better designed for the purpose in view.

Within the last few years the Canadian Copper Company have entirely remodelled their plant, the thirteen small furnaces have been discarded in favor of two large ones capable of handling 1,000 tons of ore a day. These smelters are the largest nickel smelters in the world, and have been thoroughly equipped with the most efficient and economical appliances for metallurgical work. Materials are handled as automatically as possible; not only in the smelting department, but also in the mining and other departments the appliances are now of the best. A recent development has been the substitution of electricity for power in place of steam generated by imported coal. On the Spanish River, 26 miles to the west, a water-power has been developed, which it is estimated will yield 22,000 horse-power; about half of this is now being conducted to their mines and smelters.

The Mond Nickel Company at Victoria Mine have also an extensive and modern plant. The ore for these smelters is brought by an aerial tram from the mine four miles away.

The Lake Superior Power Company have a smelter at their Gertrude Mine, and reduction works at Sault Ste. Marie.

Uses of Nickel.

The earlier uses of nickel were chiefly for decorative purposes in the manufacture of German silver, and in electro plating. Later it was discovered that a small amount of nickel alloyed with steel increased very greatly the strength of the latter, and on this property depends to-day the increasing demand for nickel. It is used in the manufacture of armour plate, whereby the weight of the metal can be greatly lessened without weakening the defensive character of the plate. It is being introduced into all forms of steel construction where lightness combined with strength is an advantage, from bicycle frames to bridge girders.

It has also been used in the manufacture of steel rails, the Pennsylvania Railroad Company having laid about 9,000 tons on some of their mountain sections. These rails cost about twice as much as the ordinary steel rails, but are estimated to last three times as long. As there will be a saving in the labor involved in renewals, and as the nickel in the old rails will all be recovered, the cost in the long run for nickel steel rails bids fair to be less than for ordinary steel rails. Should this prove to be the case, it would seem that just as the steel rail has replaced the iron rail, so nickel steel rails will replace steel rails over the whole continent—a most inviting picture for the producer of nickel to contemplate. Another minor use of nickel is in subsidiary coinage. The United States, France, Germany and other countries have found this a most desirable metal for their minor coins, and it is most surprising that Canada, the home of nickel, should not have long since substituted a nickel coin for the present clumsy cent.

Importance of Industry.

Altogether the Sudbury nickel industry employs about 1,200 men, whom we may fairly assume have families of 5, and so represent a population of six thousand directly depending on the industry. To this must be added the tradesmen who cater to them, employees of transportation companies who serve them, and of the farming and manufacturing industries which find a market with them, and who are all indirectly supported in the same way.

A MISTAKEN QUOTATION.

Editor, INDUSTRIAL CANADA:—I have just discovered that in my reply to the letter of M. Ch. Ed. Guillaume, published in your issue of October, 1905, I made a serious mistake in crediting that gentleman with the authorship of the book entitled "Le Système Métrique," from which I quoted to show that his statements in the book were in conflict with his article in your journal. The book in question was compiled by M. G. Bigourdan. When writing the October letter to you, I was under the misapprehension that M. Guillaume was the author, and felt so sure of it as to select the extracts without looking at the title page. M. Guillaume's connection with the work was, as stated in the preface, confined to supplying data from the *Bureau Internationale des Poids et Mesures*. No one can regret this error more than I do, and I hasten to acknowledge the blunder, and ask you to insert this letter in a prominent part of your next issue.

SAMUEL S. DALE.

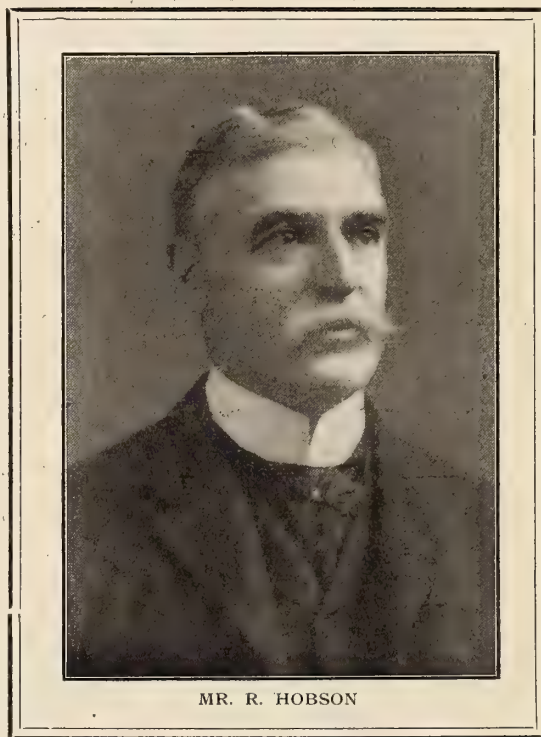
Boston, Mass., April 16, 1906.

A charter has been granted to the Galt Malleable Iron Company, Limited, and work on the building is now under way. The managing director, Mr. J. H. Fryer, hopes to have the shops going by July 1st.

THE MANUFACTURERS OF CANADA.

MR. R. HOBSON was fitted by heredity for the high position which he has attained in the manufacturing world. His father, Mr. Joseph Hobson, spent many years of usefulness as chief engineer of the Grand Trunk Railway System, and became one of the best known men in Canadian railroad life. It was under his care that Mr. Joseph R. Hobson served his apprenticeship and pursued much of his mechanical career.

Mr. Hobson was born in Berlin, Ontario, on August 13th, 1861, and prides himself on his strictly Canadian nationality. Both his father and mother were natives of this country. From the time he commenced work up till February, 1896, he was with the Grand Trunk Railway Company. There he



MR. R. HOBSON

passed through the various branches of the construction departments, till his worth was recognized by the Hamilton Blast Furnace Co. This company were the first producers of pig-iron in Ontario.

In 1896 he became secretary-treasurer of this company. In May, 1899, the Hamilton Steel and Iron Co. bought out the Hamilton Blast Furnace Co. and the Ontario Rolling Mills Co., and Mr. Hobson was appointed secretary and assistant manager of the new company. In May, 1904, he succeeded Mr. Charles S. Wilcox as general manager.

Mr. Hobson's business career has been marked by a steady advance. By his own inherent good qualities he has won recognition, and he now occupies a position of prominence in the industrial field. He is still in the prime of life and he may be expected to accomplish much, with the company to which he is attached.

A new firm of furniture manufacturers has been incorporated, with a capital of \$100,000, to do business in Stratford, under the name of James A. Cline, Limited. The company will specialize on high-grade fittings for office and residences. The various members of the firm have been engaged in furniture manufacturing and wood-working for years.

REPORT OF THE ONTARIO POWER COMMISSION

Appointed by Seven Municipalities to Investigate the Question of the Municipal Development and Transmission of Electrical Power from Niagara Falls.

To which is Appended Thirteen Special Articles by Professor R. A. Fessenden, and the Report, with Statistical Tables and Maps, of the Consulting Engineers, Ross and Holgate.

To the Mayors and the Municipal Councils of the Corporations of Toronto, London, Brantford, Stratford, Woodstock, Ingersoll, and Guelph.

Gentlemen:—

The undersigned—your Commissioners, duly appointed to enquire into the question of a municipal development of power at Niagara Falls, and to report thereon in accordance with the requirements of the Municipal Power Works Act (Chap. 25 S. O. 3 Ed. VII.)—have now completed their investigation, and beg to submit the results thereof, as follows:—

Consulting Engineers.

Messrs. Ross & Holgate, hydraulic and electrical engineers, of Montreal, were retained in this matter, and their fully detailed report to your Commissioners is appended hereto.

Power Requirements.

From the detailed report referred to the power requirements are summarized as follows:—

Total present consumption of the 7 municipalities above mentioned	73,631 H.P.
Total estimated consumption of the 7 municipalities above mentioned two years hence	87,883 H.P.
Net present consumption of the 7 municipalities above mentioned	55,325 H.P.
Approximate present consumption of 11 additional municipalities as undernoted.....	25,800 H.P.

In connection with the above it is to be noted:—

- 1st.—That the estimated increase in power consumption two years hence is limited to the anticipated increased demand of existing consumers. No allowance has been made for additional demands that will arise in connection with inter-urban electric traction development, nor for the probable electrification of steam railroads.
- 2nd.—The present net consumption of the seven municipalities directly represented herein covers the quantity of power which—subject to satisfactory prices and existing contracts—an operating commission should, within a reasonable time after the completion of the proposed works, secure supply contracts for. That is to say, that deduction has been made from the gross consumption to cover all power, which, because of special local conditions, is regarded as being beyond the reach of municipal competition.
- 3rd.—In carrying out any transmission scheme appropriate to the needs of the seven municipalities represented herein, it becomes possible to furnish power under very advantageous conditions to certain other municipalities, namely:—Hamilton, Dundas, and Paris, which are in the direct route of transmission; St. Thomas, which is within convenient distance of London; Galt, Hespeler, Preston, Berlin, and Waterloo, which are within convenient distance of Guelph; and St. Mary's and Mitchell, which are within convenient distance of Stratford. The operating commission could, because of transmission conditions, deliver to municipal or independent distributing companies in these places the power required by them at very attractive prices, while at the same time such additional deliveries would reduce the cost of power required

by the seven principal municipalities. The requirements, therefore, of these eleven additional municipalities were approximated at 25,800 H.P., as given above; hence the net requirements of the seven municipalities directly represented by your Commissioners, plus the approximate requirements of the eleven municipalities aforementioned, amount to 81,125 H.P. The municipalities included in the subsidiary group are limited to those having a population of 2,000 or over.

Making allowance, however, for the Operating Commission securing its contracts by degrees, your Commissioners have had estimates prepared of the cost of a development capable of supplying 100,000 H.P., but equipped for the supply of:—

- 1st.—30,000 H.P., being approximately one-half the present net requirements of the seven principal municipalities.
- 2nd.—60,000 H.P., representing approximately the total net requirements of the said seven municipalities, and
- 3rd.—100,000 H.P. representing the supply of the net requirements of the eighteen municipalities aforementioned with a margin for growth of demand.

Capital Costs.

The capital costs of the development, transmission and distribution of the three amounts of power indicated, including interest and sinking fund for construction period, have been estimated and apportioned between the participating municipalities as follows:—

	Cost of 30,000 H.P.	Cost of 60,000 H.P.	Cost of 100,000 H.P.
Toronto	\$4,323,096	\$6,265,424	\$6,216,137
London	847,119	1,095,356	945,185
Brantford	429,152	571,097	509,248
Guelph	317,441	425,386	377,821
Stratford	329,923	431,018	368,154
Woodstock	216,226	278,939	244,589
Ingersoll	221,672	287,391	249,754
*Hamilton			1,163,812
*St. Thomas			399,438
*Paris			123,322
*Dundas			66,359
*Mitchell			97,847
*St. Mary's			130,136
*Berlin			426,393
*Waterloo			189,628
*Preston			106,243
*Hespeler			48,095
*Galt			246,939
Total	\$6,684,629	\$9,354,611	\$11,909,100

It is, however, to be noted:—

- 1st.—That the costs of the 30,000 H.P. and the 60,000 H.P. developments include the complete transmission and distribution plants required to serve the seven municipalities concerned;
- 2nd.—That the cost of the 100,000 H.P. development includes the complete transmission and distribution plants required to serve the seven principal municipalities; but

*N.B.—These costs are according to engineers' specifications.

Subject to distribution costs.

it includes only the development and transmission plant outlay required in connection with the eleven subsidiary municipalities, the distributing plants required being excluded from consideration.

3rd.—That the calculation of the approximate requirements of the eleven subsidiary municipalities and the estimate of the additional capital cost involved in meeting these needs at the municipal sub-station terminals represent a purely voluntary work of the engineers—not called for by your Commissioners. This cost, therefore, is submitted as additional information. The project it covers represents merely one mode of reducing the cost of power to the municipalities directly represented by your Commissioners, while at the same time it undoubtedly confers great benefits upon the additional municipalities which would be served by it. This will be seen clearly in the later references to operating costs.

4th.—That, if the said eleven municipalities were to join those represented by your Commissioners for the purpose of carrying out a complete consolidated undertaking, beginning at Niagara Falls and terminating at the consumers' premises in each of the eighteen municipalities, the cost involved in the eleven additional distributing plants would require to be ascertained and added to the figures given above.

5th.—That the site at Niagara Falls, which is recommended for the purpose of carrying out the above development is marked No. 4 on map No. 1 annexed hereto, and the routes of the proposed transmission lines are shown on map No. 2 annexed hereto. For a technical description of the complete undertaking reference is made to the engineers' report annexed.

Annual Expenses.

The estimated total annual expenses of all kinds, including water rental, repairs, renewals, contingencies, interest, and sinking fund, but excluding taxes for the reason that the undertaking is expressly exempted from taxation, are as follows:—

	30,000 H.P.	60,000 H.P.	100,000 H.P.
Interest and sinking fund.	\$371,163	\$519,425	\$661,266
All other charges	488,447	619,126	752,368
Total	\$859,610	\$1,138,551	\$1,413,634

It is to be noted that:—

1st.—Under the instructions of your Commissioners, and for reasons hereinafter stated, interest has been computed at the rate of $4\frac{1}{2}$ per cent. per annum, and the sinking fund charge has been computed upon the basis of retiring in forty years the whole bond issue required to pay the original capital cost, but upon the assumption that the investment thereof shall be made at a maximum rate of 4 per cent.

2nd.—The above estimate of expenses does not include anything for distribution in the eleven subsidiary municipalities, for the reason already stated in the explanation of capital costs.

Service Rates.

The rates that it would be necessary to charge consumers in order to make the undertaking self-sustaining on the three developments indicated, are as undernoted. These rates are computed on a twenty-four hour basis. The variations of price required to meet the varying duration of service demanded by consumers must be settled by the

Operating Commissioners with regard to the local conditions of demand, etc. These will vary in each municipality, and, as they will remain unknown until the supply contracts are entered into, they cannot be intelligently approximated.

I.—Motor service per H.P. per annum: 24-hour service at consumers' premises.

Municipality.	30,000 H.P.	60,000 H.P.	100,000 H.P.
Toronto	\$21.97	\$15.73	\$14.60
London	53.07	23.87	20.34
Brantford	30.02	17.93	15.57
Guelph	27.68	18.26	16.70
Stratford	33.67	21.45	19.42
Woodstock	34.48	21.05	17.53
Ingersoll	33.96	21.61	17.99

II.—Arc lighting: Cost per lamp per year.

Municipality.	30,000 H.P.	60,000 H.P.	100,000 H.P.
Toronto	\$42.02	\$37.61	\$36.48
London	54.08	44.89	41.36
Brantford	49.73	42.91	40.55
Guelph	47.84	40.69	39.13
Stratford	56.83	47.23	45.20
Woodstock	56.16	48.16	44.64
Ingersoll	72.58	64.02	60.40

III.—Incandescent lighting: Cost per K.W.H.

Municipality.	30,000 H.P.	60,000 H.P.	100,000 H.P.
Toronto	\$.0741	\$.0640	\$.0614
London . . . . .	.115	.0925	.0839
Brantford . . . . .	.0945	.0778	.0720
Guelph . . . . .	.114	.0965	.0926
Stratford . . . . .	.1218	.0983	.0934
Woodstock . . . . .	.1307	.1091	.0995
Ingersoll . . . . .	.1321	.1112	.1023

IV.—The surplus power generated and transmitted with the object of the subsidiary municipalities would cost at the municipal sub-station switchboards—that is, without any allowance for the local distributing cost—as follows:—

Municipality.	Cost per H.P. per annum at municipal switchboard.
Hamilton	\$ 8.89
St. Thomas	15.09
Paris	12.19
Dundas	11.13
Mitchell	24.62
St. Mary's	19.67
Berlin	12.68
Waterloo	14.55
Preston	16.00
Hespeler	20.06
Galt	15.85

Present Costs of Steam Power and Lighting Services.

The average costs of steam engine power developed for ten-hour day industrial use under the general conditions prevailing in the municipalities your Commissioners represent have been investigated and computed as undernoted. The costs for a twenty-four-hour service required in public service plants vary with the peculiar conditions of each undertaking, but they are, of course, much higher than those given below. The arc and incandescent lighting rates are reported by the engineers as varying considerably, but the

undernoted scale is submitted by them as a fair approximation.

Average steam power costs: Ten-hour service.

Indicated horse-power of plant.....	10 H.P.	....\$111.50
" " " "	25 H.P.	.... 78.00
" " " "	50 H.P.	.... 57.50
" " " "	75 H.P.	.... 53.50
" " " "	100 H.P.	.... 48.00
" " " "	150 H.P.	.... 40.60
" " " "	250 H.P.	.... 32.00
" " " "	500 H.P.	.... 27.80
" " " "	750 H.P.	.... 24.00

These prices are based on a 75 per cent. load, which corresponds with average existing conditions.

Approximate Lighting Rates.

Municipality.	Incandescent per K.W. hour.	Arc lamp per year.
Toronto	8c.	.... \$69.35
London	9c.	.... 83.95
*Brantford	10c.	.... 55.00
*Guelph . . . (Sliding discount ren-)		.... 65.00
*Stratford . . . ders difficult any at-)	.... 10c.-15c.	.... 65.00
Woodstock (tempt at accurate)		.... 60.00
Ingersoll . . . statement of rates.		.... 60.00

Savings Effected Under a Municipal Development.

The savings that would be realized under a municipal development have been carefully estimated. The present net annual demand for power by the seven municipalities your Commissioners represent, which ought, under a municipal development, to be supplied by the Operating Commission, amounts to 55,325 H.P. This includes arc lighting, incandescent lighting, manufacturing, pumping, traction and other public service requirements. The savings, which represent the difference between existing costs and the costs that would follow a 100,000 H.P. municipal development are as follows:—

	Amount of same.	Representing a reduction of existing costs of.
Estimated savings on.		
Arc light service	\$ 78,257.00	.... 45%
Incandescent light service....	92,537.00	.... 21%
Industrial motive power	769,531.00	.... 69%
Other motive power	924,233.00	.... 77%
Annual savings	\$1,864,558.00	.... 63.5% = av. %

Now it is to be observed:—

- 1st.—That these savings are—subject to the condition next noted—the minimum that may be expected. The estimates have been made on the most conservative basis. The existing commercial costs have been estimated on a low, and the proposed municipal costs on a high basis.
- 2nd.—That a certain liquidation, however, of existing plant and equipment and the replacement thereof by motors to suit the changed conditions will be necessary. These changes will involve a certain loss of capital. The exact amount cannot be estimated with absolute accuracy. No two places are the same and each individual liquidation will be affected by the manner in, and the local conditions under, which it is accomplished. It is also highly important to remember that the true loss involved is not the difference between the book values of the properties

liquidated and the liquidation proceeds, but the difference between the intrinsic value and the liquidation proceeds of the properties in question. Your Commissioners have had a careful and conservative estimate made of the approximate loss that may arise in connection with the necessary liquidation, and the additional capital expenditure that will be necessitated by the motor replacements. After adding 50 per cent. of the engineers' estimates—which are themselves conservative—the amount is less than \$4,000,000. And if the capital sum of \$37,291,160 were invested in 5 per cent. per annum interest bearing securities on behalf of the power consumers in question, the annual income they would collectively derive therefrom would amount to exactly the savings above estimated, namely, \$1,864,558. These savings, therefore, represent a capital value of over \$37,000,000, from which, if the \$4,000,000 above mentioned is subtracted to cover the loss and cost of capital changes involved, a net saving of the capital value of \$33,000,000 remains.

- 3rd.—That the saving in question is real, not imaginary. There is no difference to the immediate beneficiary between \$100 per annum saved in expenditure and \$100 per annum added to income. In either event he is \$100 per annum better off. If \$100 per annum be saved in expenditure and invested in a given security, that security is just as real and genuine as though it represented the investment of an equal addition to income. The capital value of \$33,000,000 above estimated represents, therefore, a real and substantial addition to the wealth of the power and light consumers. It is to be emphasized that this is not a mere abstract mathematical proposition. It is a substantial fact, which is only dependent for realization upon the decision of the municipalities and the retention of the requisite technical and business ability to give effect to that decision. Mathematics are employed only for the purpose of presenting an adequate conception of the value involved.
- 4th.—That the savings indicated accrue exclusively to the consumers of the seven municipalities your Commissioners represent. They do not, however, represent the savings on all the power consumed in these municipalities, but only on that part of it which is believed the Operating Commission may with reasonable ease secure contracts for. No allowance has been made in the above estimate for the savings accruing to the consumers of the eleven subsidiary municipalities, whose needs in some measure the 100,000 H.P. development will supply. If, however, a general perception of the great commercial value of a municipal development should manifest itself, and in consequence an enterprise were carried out suited to the needs of all those in this Province who might and ought to, participate therein, the project would go far beyond the limit of that which is here dealt with, and as a further consequence the costs would be still further reduced and the aggregate saving to the participants would reach colossal figures.
- 5th.—It is also important to remember that the municipal development prices above mentioned cover a twenty-four-hour service. Only a small proportion, however, of the public demand is for a twenty-four-hour service, and it becomes, therefore, an important question with every power supply company to make contracts which will enable it as far as possible to sell the whole of its power for the whole of the time available, that is, for twenty-four hours daily. For the purpose of illustrating this matter as clearly as possible in a non-technical fashion,

*Probable midnight schedule.

let it be supposed that for a given development of 1,000 H.P. there should be a demand as follows:—

For a 24-hour service	250 H.P.
For a 10-hour service, from 7 a.m. to 6 p.m. . .	750 H.P.
For an all night service, from 6 p.m. to 7 a.m. .	750 H.P.
	<hr/> 1,750 H.P.

It is clear that if demands of the above character were made on the plant in question the effect would be that of greatly increasing its earnings. Suppose, for further illustration, that the standing cost of maintaining a twenty-four-hour service was \$20 per H.P. per annum. The yearly earnings of a 1,000 H.P. plant at \$20 per H.P. per annum would amount to \$20,000, but if, under the purely illustrative conditions mentioned above, the twenty-four-hour consumers were charged \$20 per H.P. per annum, and the ten-hour daily, and the all-night consumers were charged respectively \$15 per H.P. per annum, the yearly earnings of the plant would be as follows:—

24-hour consumers, 250 H.P. at \$20.....	\$ 5,000
10-hour daily consumers, 750 H.P. at \$15..	11,250
All-night consumers, 750 H.P. at \$15.....	11,250

Total \$27,500

Or 37½ per cent. in excess of the first named amount. The process of regulating the sale of power with the view of insuring that the demands upon a plant shall be made as uniform as possible for the full period of twenty-four hours in each day is called in technical language "flattening the load curve." The full significance and meaning of this technical phrase will be made perfectly clear by reference to the diagrammatic explanation given by Professor Fessenden in his brochure annexed hereto. Now it is to be carefully noted that the estimated income of the proposed municipal power development does not include any loading or allowance for the additional income that will be realized under practical working conditions from the flattening of the load curve. It is, however, obvious that the power consumed at night by arc and incandescent lighting is available for sale during the day, and, reciprocally, whatever power is consumed during the day by industrial and other undertakings is available for sale during the night. To whatever extent the process is realized the earnings of the undertaking will be increased. Now these increases, which it is conceivable may run into very substantial figures, may be utilized in any of the following ways, namely:

- 1st.—To reduce the motor and lighting rates already indicated.
- 2nd.—To pay for any improved installations that may be necessitated by the progress of invention.
- 3rd.—To increase the sinking fund and to retire more rapidly the original bond issue.

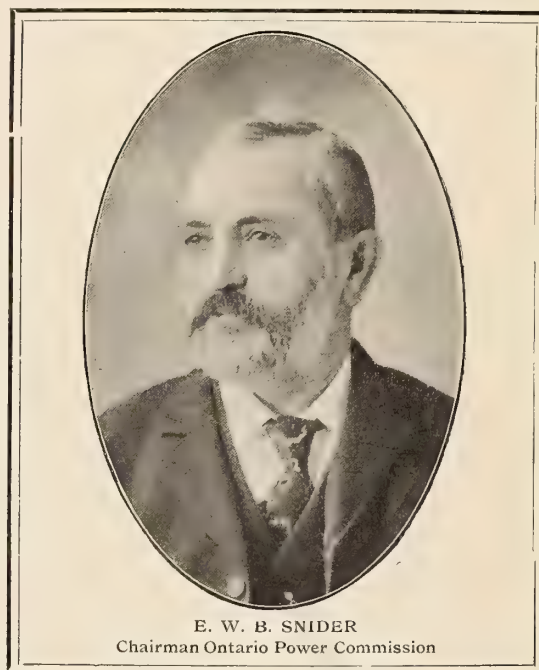
But to whatever purpose such additional income may be applied it is clear that it constitutes a financial saving distinct from and additional to that which is estimated above. It will also be carefully noted the 37½ per cent. excess earnings from this source which is worked out in the illustration given above is only illustrative. It is not intended to afford any index to the actual percentage of additional income that may be expected under the practical conditions that will be encountered.

- 6th.—It may not be out of place to identify clearly the beneficiaries of the aforesaid savings. It is a very simple

task. The direct consumers of light and power are divisible into the following classes:—

- (1) Municipal corporations.
- (2) Trading and other corporations having gain for their object.
- (3) Unincorporated business firms.
- (4) Private householders.
- (5) Incorporated and unincorporated associations not having gain for their object.

Nor is it perfectly clear that any savings accruing to municipal corporations will take expression in reduced demands on the ratepayers. Incorporated and unincorporated associations whose object is not that of gain, will, to the extent of the benefits they derive from reduced charges, relieve their supporters accordingly; or in the alternative, their various religious, educational, philanthropic and social activities will be stimulated to



the good or ill of society as the case may be. Private householders will clearly and directly reap the benefits of any reduction in the burden of existing rates. In the case of all corporations having gain for their object, the reduced charges will appear in increased profits for the shareholders, and in the case of unincorporated business firms the same effect will be produced for the proprietors. Under, however, the laws of competition and industrial development any permanent lowering of the cost of production and distribution tends also to take partial expression in reduced prices of commodities. This process, however merely transfers a part of the benefit to society at large. It is, however, to be remembered that in the increased demand for commodities, which is always created by a permanent lowering of costs, the manufacturer, merchant or other distributing agent finds ample compensation for sharing with consumers at large the advantages of any such reduction. The additional trade created thereby yields a profit in excess of that which has been distributed to the customer. It is, therefore, clear that each case of society indicated will receive directly its full share of the additional wealth so created, while it will also participate in the indirect gains proceeding therefrom that ensue to the benefit of society as a whole.

7th.—The effect on industrial development of the savings in question is, however, so important that it is worthy of special consideration. The municipalities represented by your Commissioners are pre-eminently manufacturing and industrial communities. They are equipped by nature to excel. They enjoy a high degree of proficiency in the manufacturing arts. The overflow of their aggressive and self-reliant enterprise has pushed their products into many lands. The barriers of cheaper labor and other natural conditions, which might have kept them out, have been overcome. From the great economic leverage that Niagara power—unloaded by corporation tribute—will give, an incalculable stimulus to the productive and competitive efficiency and enterprise of their manufacturers will be derived. These economic conditions will not only, in obedience to a natural law, beget an increasing activity, but they will also attract to the district the enterprise of others. Just as virgin pine on the banks of carrying waters attracts the lumberman, and as the choicest fishing grounds attract the fisherman, so will unique manufacturing conditions attract the manufacturer. As a result, therefore, of such a development as is herein considered, a great stimulus to manufacturing activity may confidently be expected. If, however, all the municipalities that are capable of being efficiently served by a Niagara Falls development were to combine and carry out an undertaking corresponding to their needs and prospects it would exercise an influence upon their future that cannot be estimated, and that the past industrial history of Ontario affords no parallel to.

Alternative Developments.

The capital and operating costs given above are based as stated upon a Niagara development at site 4, as shown on map No. 1, annexed. This is the site which is recommended both by Ross and Holgate, the consulting engineers, and by Professor Fessenden, the technical member of the Commission. Your Commissioners, however, understand that a dispute has arisen between the Niagara Falls Park and River Railway Company and the Park Commissioners as to the water rights of the former, whose intake is in the immediate vicinity of the proposed site No. 4. They further understand that it is, or has been, alleged that if a development at site 4 were carried out on the scale herein recommended it would seriously interfere with the rights claimed by the Niagara Falls Park and River Railway Company. This claim, however, has not been proven, and your Commissioners feel that to abandon the idea of developing site 4 merely because of the unadmitted and unproved claims of an existing company would hardly be consistent with their duty in the premises. The Park Commissioners have also quite recently intimated that they would be indisposed for scenic reasons to recommend that any development at site 4 be allowed. As, however, the site in question has been recommended by Mr. Isham Randolph, C.E., of Chicago, and has been held out in the published reports of the Park Commissioners as available for development, and as the plans contemplated hereunder includes a subterranean power house, which might be made to add to, rather than detract from, the beauty of the Park, your Commissioners feel that probably this difficulty could be overcome by friendly conference with the Park Commissioners, who have shown every desire to facilitate the enquiry herein. Mr. J. D. Langmuir, the President of the Board, has extended every courtesy and assistance to the representatives of your Commissioners—a fact which they desire to publicly record and acknowledge. In view, however, of these conditions it has

been deemed advisable to ascertain the additional costs involved in carrying out a substitutionary development. These have, therefore, been worked out in detail to show the capital and operating costs following a development at site 3, as marked on said map No. 1, and will be found in appendix "A" annexed hereto. The additional capital expenditure involved in developing sites numbered 2 and 1 on said Map No. 1, have also been computed and are submitted in said Appendix "A." (N.B.—Mr. Randolph was retained by the Park Commissioners.)

Financial Provisions.

Sections 34 and 42 inclusive of the Municipal Power Works Act deal with the manner of financing the undertaking. The principal directions, apart from those relating to form of procedure, are as follows:—

- 1st.—The municipal corporations concerned are authorized to issue debentures to the estimated amount of their respective shares of the capital cost, and deliver the same to a trustee to be appointed in the manner duly set forth by the Act. The debentures so issued are to be sold in accordance with the terms of an agreement to be entered into between the municipal corporations, the construction commission and the trustee, and the proceeds of the sale or sales are to be paid over to the construction commissioners in the manner duly prescribed by the Act.
- 2nd.—The construction commissioners are authorized to issue bonds secured upon the total assets of the undertaking to the amount of the proceeds of the municipal debentures aforementioned. These bonds are to be delivered to, and held by, the trustee in trust for the municipal corporations on the terms contained in the agreement aforementioned, but subject to the express trusts governing the collection and disposition of interest, sinking fund and other matters as are set forth in the Act.
- 3rd.—In the event of the capital cost of the completed works exceeding in amount the proceeds of the bonds issued in connection therewith the Commissioners are authorized with the approval of the Chief Justice of Ontario for the time being to issue "special bonds" secured by a first lien on the whole property of the undertaking and carrying "a preference over the other bonds" to meet the amount of such deficit. Further, if it should become necessary or advisable at any time to extend or improve the works or any part thereof, and provided that funds are not otherwise available to meet the cost of such extension or improvement, the Commissioners may, with the approval of the Chief Justice of Ontario raise from time to time the amount necessary by the issue and sale of "special bonds" carrying priority over the bonds as aforesaid.

Your Commissioners would be remiss in their duty if they did not point out that the borrowing of the large sum of money necessary to carry out the proposed undertaking—ranging from \$7,000,000 to \$12,000,000 on the development of site 4, according to the scale adopted—is liable to put some strain on the credit of the municipalities concerned. The credit of the municipalities represented herein stands, and deservedly stands, high. Nevertheless the heavy addition to existing debt that the necessary borrowings will involve, and the fact that the enterprise itself is a new departure for Ontario municipalities will be closely scrutinized and considered by investors. As the immediate benefits and the ultimate fruits of the undertaking are realized, caution will give place to confidence, and if the undertaking should

prove highly successful, it may ultimately become a means of raising rather than straining municipal credit. Meantime, however, the probabilities have to be considered, and for the purpose of placing the municipalities upon the strongest possible footing against the necessary loan flotation, your Commissioners recommend that:—

1st.—The municipal debentures to be issued should be secured by a specific first charge upon the bonds to be issued by the Construction Commission or upon the property itself. In addition to this, of course, they should carry the full covenant of the issuing municipalities. There will be an appreciable difference in the price they will realize if this recommendation be accepted.

2nd.—Application be made to the Legislature to allow the municipalities and the Construction Commission to vary, as may be deemed advisable at the time, the provisions of the Act in regard to the issue of "special bonds." The right to issue "special bonds" from time to time as required without any limitation as to amount when such bonds take priority over the previously issued construction bonds, is liable to interfere with the marketability of the construction issue.

Legal Position.

Section 52 of the Municipal Power Works Act expressly states that "Nothing in this Act contained shall be deemed . . . to authorize the Commissioners to supply power, heat or light in contravention of the provisions contained in sections 566 to 568 inclusive of the Municipal Act." Section 566 of the Municipal Act permits certain municipal corporations therein described to construct works for lighting the public streets, but only upon condition that an offer be first made in the prescribed manner to purchase the works and property of any existing light company "that has supplied or shall supply . . . electric light for street lighting in the municipality." Your Commissioners applied to the municipalities they represent for copies of all existing contracts with electric light companies for the purpose of ascertaining the municipal corporation rights and obligations thereunder. They received in reply copies of the contracts and governing by-laws from all the municipalities to which they applied with the exception of Ingersoll. The said contracts and by-laws were submitted to Counsel, who advised that before the municipalities could proceed to carry out the proposed undertaking, they would require to make offers to buy out the existing electric light companies in Toronto, London and Brantford. The position of Ingersoll is uncertain on account of lack of information. Upon this view of the state of the law your Commissioners instructed their engineers to value the assets of the lighting companies concerned upon the principles which the arbitrators are directed by the Municipal Act to observe in making their awards. The Brantford Electric and Operating Company, Limited, freely and courteously gave access to its premises, but the Toronto Electric Light Company and the London Electric Company refused access to their plants. As your Commissioners had no power to force admission, they had, of necessity, to restrict themselves to estimating the cost of an entirely new and independent undertaking. Their original intention was to report upon the cost of an undertaking based upon the acquisition (under the section of the Municipal Act above mentioned) of the plants of the companies in question, in addition to that of an entirely new undertaking. This course was, however, rendered impossible by the facts above mentioned. It is, therefore, to be most carefully observed that section 52 of the Municipal Power Works Act

and sections 466 to 468 of the Municipal Act (the latter being popularly known as the Conmee Act) will, as they stand at present, interfere with the carrying out of the new undertaking hereby reported on.

It may also be stated that section 11 of the Municipal Power Works Act may possibly require revision. If the construction of the proposed works should increase the debt of any participating municipality beyond the amount authorized by law at present, such municipality would be debarred from borrowing the excess amount required unless said section 11 were revised. The participating municipalities should be given power to borrow the amount necessary for the proposed works in addition to the borrowing powers they presently enjoy.

Preservation of Falls.

Considerable public agitation has recently been manifested in the United States on the question of preserving the natural beauty of Niagara Falls. The object in view is that of preserving scenic effect by limiting the amount of water to be taken from the river above the Falls for power purposes, and thereby preventing any material diminution in the quantity of water discharged over the Falls. Mr. Griggs (a former Attorney-General of the American Federal Government) gave an opinion on the 31st of January this year to the Merchants' Association of New York on the question of the "Jurisdiction and power of the United States over the use of the waters of Niagara River above and below the Falls of Niagara at points where it is contemplated to take water from the river for power or commercial purposes." This opinion, along with other related documents was made public a few weeks ago in a committee report of the United States Senate, and as throwing an interesting and reliable light upon the probable outcome of the agitation, the following excerpt may be quoted:—

"Whatever jurisdiction the State of New York has over the waters of the river and their use is subject and subordinate to the power of the National Government in two respects.

"1st.—With respect to navigation, as to which the laws of Congress are supreme.

"2nd.—As to the subject of boundary between this nation and Canada in respect to which the United States and Great Britain have the right, by treaty stipulation, to impose such conditions and regulations upon the use of the river and its waters as they deem mutually proper. A treaty duly negotiated between these two powers and ratified by the Senate of the United States would be the supreme law of the land, and if in such treaty it were provided that no such use of the waters as is contemplated should be hereafter made, and this regulation were enforced by Act of Congress, the treaty and the legislation would be valid, the rights of the State of New York and all private riparian owners to the contrary notwithstanding."

With the question of sovereign jurisdiction over the affected waters your Commissioners are not concerned. It may on the Canadian side be vested in the Dominion Government or it may be vested in the Ontario Government. The important question to be borne in mind is that against the contingency of limiting, whether by international treaty or legislation, the quantity of water which may be taken and used for power purposes, representations should be made to the Governments concerned that all the water necessary to supply the power and lighting needs of the municipalities dependent for such on Niagara Falls should be reserved for their use.

Special Articles by Professor Fessenden.

Professor Fessenden, the technical member of the Commission, has prepared for publication with this report some brief but interesting and valuable observations on various phases of the power question. They will be found annexed hereto. With reference to his article on the municipal operation of lighting plants, it must be noted that in this particular case ample provision is made for any abnormal expenditure that may be necessitated by the progress of invention. The operating costs already quoted include a sinking fund loading that will retire the whole of the original or construction issue of bonds in forty years. No large subsequent replacement of workable equipment would be sanctioned or, indeed, called for unless substantial economies in the operating costs should follow. But in the latter event the economies in question could be entirely devoted to the redemption of the replacement bonds, if such course were deemed wise or necessary. It is also to be remembered that all excess earnings that will be derived from the regulation of the load curve can, if necessary, be made available for any abnormal expenditure. Further, if in any event, the construction corporation has a statutory right to issue improvement bonds for any necessary extensions, and as the quantity of power sold should increase yearly, a proportionate reduction in the cost per unit of power may be expected yearly; this leaves room for the retirement of improvement bond issues by the automatic operation of the sinking fund, without either entrenching upon special profits or raising the scale of prices.

Reliability of Costs Submitted.

Messrs. Ross and Holgate, the consulting engineers herein, have made what they consider ample allowance for all contingencies, in respect of both capital and operating costs. Their work has been done in the most satisfactory way, with the greatest care, and, in addition to purely actuarial checks, it has been fully and critically examined and confirmed by Professor Fessenden. An estimate, of course, is always, and necessarily, subject to the risk that unanticipated conditions may be encountered in the actual physical development. It is not possible to eliminate this risk. All known and probable conditions, and the experience of the companies already established have, however, been taken into consideration, with the net result that the engineers believe the costs are over rather than under stated. Your Commissioners have every confidence in the capacity and judgment of their advisers, and they, therefore, believe that the event will vindicate the estimate.

Conditions of Success.

There is no dispute as to the existence of the power or the demand for it. There is no doubt as to the supply of technical and practical skill necessary to establish and operate the works required. There is no question as to the financial ability of the municipalities to carry out the undertaking. The one fundamental condition of success is that the constructing and operating commission shall be composed of highly capable business men whose supreme and constant aim shall be that of realizing the highest degree of efficiency in the various services. Operated thus as a purely business institution, and absolutely divorced from politics, your Commissioners have every confidence that the future of the enterprise will prove increasingly successful.

Public Criticism.

No municipal project of this magnitude can escape criticism. It will proceed chiefly from two sources, namely, from those who on principle are opposed to such extensions

of municipal activity, and from those whose interests are liable to be injuriously affected by it. Criticism proceeding from the latter source may, and doubtless much of it will, be founded on conviction, but part of it is liable to be colored by considerations of self-interest. That of the first-named order is educative in its purpose and effect. Whether it directly expounds, or merely provokes the exposition of, sound public policy, the effect is a clarification and strengthening of the public mind. For this reason, it is always to be welcomed. Criticism, however, of the order last mentioned is, alike in its motive and object, limited to purely destructive purposes. Its tone and method may vary, but its object remains the same. Now the advent of power and lighting rates, such as are indicated herein, will make such inroads upon the available market for power that opposition is naturally and necessarily assured. Nor can any exception be taken to the fact that it will be offered. It is the outcome of the natural sense of self-preservation. It has to be met and it can be met. While no good purpose would be served by attempting to anticipate detailed criticism, it may not be out of place to note that neither a contradiction of the facts reported, nor the opposing opinions of eminent experts, nor lofty academic observations upon the impropriety of such municipal ventures will either change the facts or diminish the benefits they are capable of yielding. The basal fact that power and light can be supplied under a municipal development, properly carried out—under engineering conditions equal to those of its commercial competitors—at prices beyond the reach of permanent commercial competition, is not open to argument. Neither existing nor future differences between electric and steam-power commercial rates, nor Government control of electric-power rates, nor a sliding scale of rates, nor Government expropriation of existing companies, nor any other device, can alter this basal fact or destroy the public benefits proceeding from it. The rates chargeable by the undertaking herein reported on, include provision for $4\frac{1}{2}$ per cent. interest being paid on the bonds and for their redemption at maturity. No other charges except for the necessary maintenance and operation are incurred. Competing companies have to pay considerably higher interest rates on their bonded debt, and in addition they have large issues of capital stock on which dividends have to be earned. Whether rates be fixed by the companies voluntarily or under Government regulation, regard must be paid to these conditions and the rates loaded accordingly. No criticism directed at detached, isolated, facts or figures will alter these broad underlying conditions from which the general public will derive benefits otherwise unattainable.

Municipal Trading.

Municipal administration is a branch of civil government, and the proposed undertaking may be regarded as a development of municipal trading. The intrusion of government into trading spheres, and, indeed, the extension of its functions beyond the smallest minimum possible has occasioned much debate and received much condemnation. Perhaps the weightiest reason ever urged in favor of limiting its functions was that of John Stuart Mill, who saw in every extension of government agency only the deprivation of the people of opportunities for genuine training in the real business of life. Without the opportunity, development is impossible, and a stunted growth and civilization was, therefore, in his view the penalty that would be exacted for neglecting this principle. A great change, however, has taken place in the complex organization of society in the last half century, and under our modern democratic system of government there is not a cleavage between ruler and ruled cor-

responding to that which Mill contemplated. Indeed the extension of municipal trading or the municipal operation of public services may be regarded as an evidence of the fitness of the people in, rather than as a certain means of unfitting them for, the business of life. Such branches of civic enterprise represent the voluntary efforts of society to work out a more efficient civilization, and in their organization and operation they afford the very opportunity for development that Mill desired. It has, of course, been alleged that such extensions of municipal activity constitute a check to industrial development. Without, however, surveying the whole field, it is tolerably clear that this particular enterprise constitutes an industrial development of the first magnitude. And inasmuch as it is not proposed to monopolize the waters of the continent or even of the Province, there is an ample field left for independent commercial progress and for individual development, even if the latter were impossible under state or municipal institutions.

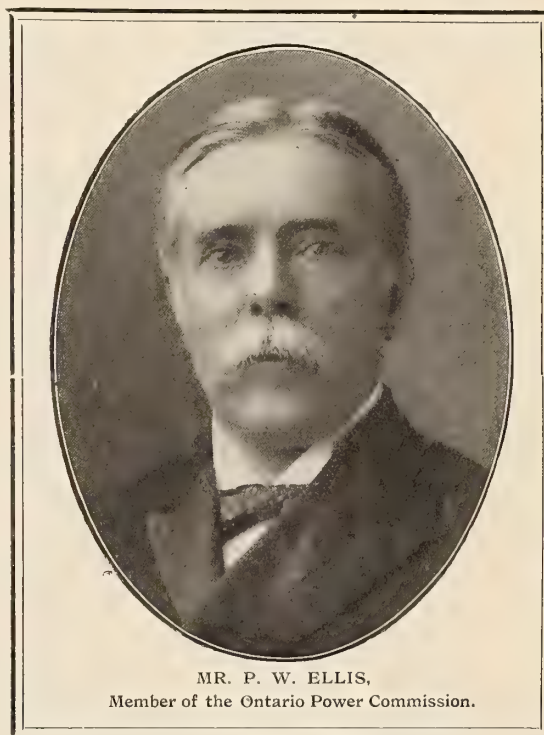
All other objections to such enterprises rest on grounds of expediency. The growth of municipal debt, inferior management, consequent loss to the ratepayers and other objections of like order comprise the whole indictment. These, of course, can only be considered in their particular applications. In this special enterprise there is no reason why any of these calamities should occur. It is proposed to operate the undertaking by a special and independent board of commissioners, and it has not been predestined that the most incapable men of the community shall be so appointed. The municipalisation of certain public services that lend themselves readily to such control seems to be an increasing tendency of the times, despite the fact that numerous failures have occurred. It may not be out of place to recall the fact that while the failures have been heralded and held up as warnings, there have been some conspicuous successes. The city of Glasgow, as far back as 1860, completed its great scheme of civic water-works, in regard to which every conceivable prediction of disaster had been made. Of the commercial success achieved, not to speak of the great and beneficent effects on the public health and upon the industrial interests of the city, it is almost impossible to speak too highly.

Similarly the Gas Supply Co., the electric light and power supply, and the tramway services have been taken over with signal success. The price of gas was reduced from 4s. 7d. in 1870 to 2s. 1d. in 1904 per 1,000 feet. The Electric Power and Light Department was acquired in 1890 for the capital price of £13,000. The annual gross revenue has increased until for the year ending 31st May, 1905, it amounted to nearly two hundred thousand pounds sterling. The Tramways Department has been operated with conspicuous success, some criticism to the contrary notwithstanding. This success includes, not only an excellent service, but the most pleasing financial results. In 1894, 54,000,000 passengers were carried; in 1904-1905, 195,000,000 passengers were carried. When the corporation system was commenced the fares were reduced, and from time to time as the revenue permitted, further reductions have been made. The governing principle in these services is to make them separately water-tight and self-sustaining, applying to reduction of cost or improvement of service the profits of each undertaking separately. In 1903 the tramway service net income, after providing for maintenance and certain renewals, amounted to nearly £300,000, out of which provision was made for special depreciation, special renewals, interest and sinking funds, and a balance of £25,000 donated to what is styled the "Common Good." It is also worthy of note that the committee of twenty-five representatives to whom the City Council has entrusted this large undertaking

has not among its members, and never has had, one single member who could be called a tramway expert. Other illustrations might be given of the success that has attended municipal enterprises, but these will suffice. They are stated because encouragement is naturally derived from examples of success, just as discouragement and restraint follow examples of failure.

Some Large State Works.

Of the beneficent fruits of state works on a larger scale and under different political conditions many examples might be given. The great Nile Delta Barrage built about ten miles below Cairo, and which British engineers took seven or eight years to renovate, has had the effect of bringing into cultivation about one million acres of land, the annual yield of which is from £5,000,000 to £7,000,000. The Assuam dam, designed by Sir Wm. Willcocks, raises the water level 65 feet above low level and stores from 1,000,000,000 to 1,200,000,000 tons of water, affecting the



MR. P. W. ELLIS,
Member of the Ontario Power Commission.

river for one hundred and forty miles back. This work irrigates one million acres of land and increases the value of the produce by about £2,500,000 annually. These facts are quoted as illustrating further the beneficent effects on human welfare that follow intelligent and well conceived state aid. The statement in advance of the fact, of the estimated results of any great work, is always received with a certain measure of doubt and scepticism, but the actual results that have been achieved in the municipal and larger state undertakings referred to above are greatly in excess of the original expectations. Your Commissioners do not hold the opinion that there is some radical inherent defect in Canadians as compared with others that will foredoom to failure a civic enterprise such as that under consideration.

There does not seem to be a legitimate ground for complaint on the part of existing power companies if the proposed development be carried out. Aid to railways, regulation and control of railway rates, Government construction and operation of railways, regulation and control of telephones and many kindred undertakings, have been sanctioned by public opinion, and the corporate undertakings affected

by the proposal herein have been developed under these conditions and subject to these risks. In effect they operate no more harshly against existing corporate interests than existing commercial conditions and tendencies operate against private individuals. The private trader has had to risk his capital in competition with the highly organized and heavily capitalized department store of modern growth. The ordinary manufacturer risks his capital in competition with the great corporate combinations of the day. Individual enterprise was neither insured against these risks nor indemnified in respect of their consequences. If, in the development of industrial efficiency, the corporations in turn are exposed to some of the risks they have created for others, this seems to be merely a continuance of common experience. The industrial future of the Province is in question. The leverage arising from the proposed power, as has already been pointed out, is so great that in the keen competition of the present day it cannot be ignored. Moreover it is not proposed to monopolize the market. There is an ample field in the electrification of railways and the growth of the interurban electric railway systems of the future for the existing companies to operate in, and by wise and prudent management to conserve their capital.

Conclusion.

Your Commissioners believe that the industrial future of the communities that are capable of being supplied with electric-power generated at Niagara Falls depends in very great measure upon the utilization of that power, and they strongly and unhesitatingly recommend that—whether or not expropriation of the lighting companies referred to becomes necessary—the proposed enterprise be taken up and pushed to completion. They are unanimously of opinion and they definitely recommend:—

1st.—That a municipal development of the type reported on herein be carried out on a scale suited to the needs of as many municipalities as are willing to join in the undertaking; and to that end they advise that all other municipalities capable of being served by a Niagara Falls development be furnished with copies of this report, and be requested to join in the carrying out of the proposed enterprise.

2nd.—That in the event of other municipalities being unwilling to take up the matter, these directly represented herein, namely, Toronto, London, Brantford, Guelph, Stratford, Woodstock, and Ingersoll, carry out with all possible expedition a development of the 60,000 h.p. type reported on.

3rd.—That, subject to the approval of the construction engineers, the development be carried out at site 4, as shown on the illustrative map No. 1 annexed. This site is for development purposes, the best and cheapest within the Park limits. This opinion appears to have been held by Mr. Randolph, C.E., of Chicago, who was retained by the Park Commissioners to report upon the available power sites. It has been confirmed by Messrs. Ross and Holgate, and ratified by Professor Fessenden, and they do not think that the interests of the municipalities should be sacrificed either to illusory fears that the beauty of the park would be impaired by the proposed development or to any dispute arising out of the contested claims of another company.

In the event of other municipalities being willing to join with those your Commissioners represent, for the purpose of carrying out a development corresponding to their needs, it would be well to make specific enquiry into the actual

power conditions prevailing in such other municipalities, and at the same time to estimate the cost involved, including the distributing stations and plants, that would be required in connection therewith. By so doing the total cost of one consolidated scheme, beginning at Niagara Falls and terminating at consumers' premises within the participating municipalities, would be ascertained, and could be placed before the respective bodies of ratepayers for consideration. Your Commissioners have—by ascertaining and stating the facts herein reported, and by submitting the conclusions and recommendations that a careful study of the facts has led them to—discharged the duties they assumed, and they now leave the matter and its issues in the hands of the public they have had the honor of representing.

Respectfully submitted,

(Signed) E. W. B. SNIDER, Chairman.
P. W. ELLIS,
W. F. COCKSHUTT,
A. BECK,
REGINALD A. FESSENDEN.

APPENDIX "A."

Capital Costs and Operating Rates that Would Follow a Development at Site Marked No. 3 on Annexed Map

No. I.

Capital Costs:

Municipalities.	Cost of 30,000-H.P.	Cost of 60,000-H.P.	Cost of 100,000-H.P.
Toronto	\$5,043,677	\$6,982,362	\$6,708,654
London	927,378	1,175,209	1,000,041
Brantford	486,100	627,757	548,172
Guelph	361,238	468,957	407,755
Stratford	365,748	466,661	392,639
Woodstock ...	239,689	302,283	260,635
Ingersoll	245,272	310,871	265,884
*Hamilton			1,315,251
*St. Thomas ...			432,622
*Paris			135,923
*Dundas			74,019
*Mitchell			102,798
*St. Mary's			138,367
*Berlin			463,157
*Waterloo			204,720
*Preston			114,193
*Hespeler			51,520
*Galt			264,543
Totals	\$7,669,102	\$10,334,100	\$12,880,893

*Subject to addition of municipal distribution cost.

Service Rates:

I.—Motor Service Per H.P. Per Annum: 24-Hour Service at Consumers' Premises

Municipality.	30,000-H.P.	60,000-H.P.	100,000-H.P.
Toronto	24.61	17.04	15.40
London	55.60	25.13	21.09
Brantford	32.54	19.19	16.33
Guelph	30.36	19.58	17.50
Stratford	36.30	22.75	20.20
Woodstock	37.06	22.34	18.31
Ingersoll	36.56	22.90	18.77

II.—Arc Lighting: Cost Per Lamp Per Year.

Municipality.	30,000-H.P.	60,000-H.P.	100,000-H.P.
Toronto	44.66	38.92	37.28
London	56.61	46.15	42.11
Brantford	52.25	44.17	41.31
Guelph	50.52	42.01	39.93
Stratford	59.46	48.53	45.98
Woodstock	58.74	49.45	45.42
Ingersoll	75.18	65.31	61.18

III.—Incandescent Lighting: Cost Per K. W. H.

Municipality.	30,000-H.P.	60,000-H.P.	100,000-H.P.
Toronto .....	.0801	.0670	.0633
London .....	.1213	.0956	.0857
Brantford .....	.1007	.0809	.0739
Guelph .....	.1205	.0997	.0946
Stratford .....	.1282	.1015	.0953
Woodstock .....	.1377	.1126	.1017
Ingersoll .....	.1385	.1143	.1042

IV.—Surplus Power.

The surplus power generated and transmitted with the object of serving the subsidiary municipalities would cost at the municipal sub-station switch-board as follows:—

Cost per H.P. per annum at
Municipal Switchboard.

Hamilton	\$9.61
St. Thomas	15.89
Paris	12.95
Dundas	11.86
Mitchell	25.41
St. Mary's	20.47
Berlin	13.42
Waterloo	15.31
Preston	16.77
Hespeler	20.88
Galt	16.62

Additional capital outlay that would be incurred by the development of site No. 2 and site No. 1 respectively, over and above that attached to the development of site No. 4.

Additional cost of:	30,000-H.P.	60,000-H.P.	100,000-H.P.
Site No. 2	\$1,278,678	\$1,273,735	\$1,265,996
Site No. 1	1,475,717	1,470,775	1,463,036

APPENDIX "B."

Miscellaneous Matters:—

I. The length of time required for the completion of the proposed works has been estimated by the Engineers at from two to three years. They believe that under strong and vigorous construction management they might be completed in two years.

II. Interest and sinking fund have been computed on the capital costs as follows:—

1st.—On the Niagara Falls Development, assuming a construction period of three years.

2nd.—On the transmission line, the municipal substations and the municipal distributing stations and equipment, assuming a construction period of two years.

The total amount of interest and sinking fund, which it is estimated will accrue to the construction period, and in consequence, require to be paid out of capital is: for the 30,000-h.p. development, \$389,563; for the 60,000-h.p. development, \$536,614; and for the 100,000-h.p. development, \$698,044.

III. Under thoroughly competent executive management there does not seem to be any good reason why the undertaking should not be made self-sustaining within two years from the date of the completion of the works. Con-

tracts with consumers will be made gradually, but the advantage in rates over existing commercial rates is so great that there should be little difficulty in securing them. If, however, contracts should be made in the meantime between competing electric power companies and consumers who otherwise would become customers of the Municipal Electric Power Corporation; and, in consequence thereof, the Municipal Power Corporation were unable to effect the sale, within the said period of two years, of the whole of the output necessary to pay expenses, the initial rates of the latter corporation might be loaded to cover the estimated deficiency for the period thereof.

IV. The water rentals payable to the Queen Victoria Niagara Falls Park Commissioners have been estimated at the same rates that the several chartered companies now in existence pay. The Park Commissioners have agreed with the companies in question that no right to use the waters of the Niagara River within the Park shall be given on more favorable terms than the existing companies enjoy.



HON. ADAM BECK
Member Ontario Power Commission

V. The computation of interest at the rate of $4\frac{1}{2}$ per cent. does not mean that, in the judgment of Commissioners, the municipalities concerned will require to pay that rate of interest upon the necessary loan. The municipalities will, at the proper time, borrow at the best rates that the market permits of, but it was deemed wise to load the operating costs with an outside rate of $4\frac{1}{2}$ per cent. The undertaking could—on the operating costs worked out—very well carry this rate of interest. The difference between the said rate of $4\frac{1}{2}$ per cent., and the rate at which the municipalities actually borrow may be rebated in favor of the Operating Commissioners, or may be retained as a profit by the municipalities interested, as may be arranged when the proper time comes.

VI. The municipalities of Woodstock and Guelph own, it is understood, their own electric lighting plants. No allowance has been made in the costs submitted hereunder for the utilization of any part of these plants. An entirely new undertaking from beginning to end has been estimated upon. In the event, therefore, of these plants being utilized or liquidated, the capital costs estimated herein will be reduced accordingly.

SPECIAL ARTICLES BY PROFESSOR FESSENDEN

Cheap Power.

Cheap power is the most important factor in the industrial development of a country or province, and cheap power means water power, for power can be produced hydraulically under favorable circumstances at a small fraction of the cost of producing it by steam. This condition is likely to obtain until some means is invented of deriving energy from the sun's heat, and at present there is no immediate prospect of this. Moreover, the difference in cost between hydraulic power and steam power will probably be considerably accentuated within the next fifty years, on account of an increase in the price of coal, since there is little prospect at the present time of any considerable increase in the thermo-dynamic efficiency of heat engines.

Although the use of water power antedated the steam engine this use was limited even after the manufacture of steel was sufficiently advanced to furnish the necessary machinery, because the power could not be distributed. Therefore, for many decades cheap power meant cheap coal, and it is only recently, since the perfection of means for distributing power electrically, that water-power has come to the front.

Short as the time has been it has proved that such countries as Norway, Sweden, and Switzerland, heretofore reckoned among the poorer countries, have in their waterfalls a source of wealth more valuable than gold mines, and every indication at the present time is to the effect that these countries will in the near future develop to an extent which twenty years ago would have been considered incredible.

With the exception of the Dihang in Northeastern India and Thibet there is no water-power in the world comparable with that obtainable in the neighborhood of Niagara Falls. This section of the country has in this water-power an asset destined to make it perhaps the foremost manufacturing centre in the world provided its development is not checked by legislation. Considered as a natural asset the gold fields of the Rand are relatively of small value compared to the value of the water-power of Niagara Falls.

Niagara Falls.

A source of water-power is valuable to a country both directly and indirectly. Directly, in the actual cheapening of the cost of power. For example, if a manufacturer pays a thousand dollars yearly for coal, labor, rent and insurance to produce by steam the power he needs, and he can develop a water-power which will give him the same amount for \$250 a year, the hydraulic plant is worth to him \$750 a year. Indirectly, if the manufacturer finds that his operations are conducted more efficiently than his yearly output is larger; that he can deliver his goods to market cheaper; that the ability to obtain cheap power has led other manufacturers from whom he purchases supplies to locate near him; and if, as a member of a large manufacturing community, he can obtain freight rates and access to markets which as a member of a small manufacturing community he could not get.

Considering the first of these alone, the direct value of the water-power obtainable from the flow from Lake Erie into Lake Ontario is conservatively estimated at \$2,000,000,000.

It may be advisable to show how this figure is derived.

Estimates of the flow of the Niagara River vary somewhat, but we may take as the average flow 75,000,000 gallons per minute. Taking the difference of level between the two lakes as 320 feet, this gives a figure of approximately 6,000,000 horse-power.

Under an adequate development and other conditions such as obtain in a hydraulic plant of this character, a horse-power year can be developed at a cost which is at least from \$15 to \$70 less than that for which it can be produced by steam. Assuming an average difference of only \$20, the annual saving in cost when the full amount of power is developed will be \$120,000,000. This represents the interest at five per cent. on more than \$2,000,000,000, and the capitalized value of this saving to the people of the Province of Ontario may, therefore, be taken as more than \$1,000,000,000.

The above estimate is a conservative one. In practice the average cost of a horse-power year produced by steam is found to be considerably greater than that assumed, and a value of more than \$250,000,000 per annum would be found to be more nearly in accordance with the actual facts.

To produce this horse-power by steam would require more than 60,000,000 tons of coal each year. This figure is a conservative one, as an actual average of the amount now used per horse-power would give a higher figure. As the average tonnage mined per year per man employed in the coal mines is 600 tons, it will be seen that the present waste represents the labor of 100,000 additional men in the coal mines. Incidentally it represents also an annual loss of 300 lives, and more than 1,000 serious casualties from accidents in the mines.

In the above estimate of the value of this water-power to the Province no account has been taken of the fact that where coal is mined abroad and brought into the country so that the money received by the miners is spent outside the country using the coal, the loss from failure to employ available water-power is much greater. Nor has any account been taken of the great indirect economic gains accompanying the adoption of electricity for power purposes.

An available head of 320 feet has been taken instead of the head of 160 feet which is actually obtainable at Niagara Falls. A head of 320 feet was taken because there would appear to be no engineering reason why this head could not be obtained by going across the Niagara Peninsula instead of to the Falls. In addition to the much higher head obtainable by going across the Niagara Peninsula and the consequent cheapening in the hydraulic and electric installation, there is the further advantage that to obtain the same amount of power at the Niagara Peninsula only one-half as much water would be needed as at the Falls, and consequently twice as much power could be obtained for the same diminution in the flow of the Falls.

The matter may be presented in still another light. It is hard to grasp the meaning of such figures as \$2,000,000,000, or \$120,000,000 per annum, or 60,000,000 tons of coal per annum, or 6,000,000-horse-power.

When, however, we realize that 6,000,000-horse-power is more than the power of all the steam engines and boilers in the United Kingdom of Great Britain and Ireland, we begin to get an idea of what these figures mean.

Since the balance of this report was written Mr. G. T. Beilby has published his presidential address on the subject of the Coal Consumption of the United Kingdom. He shows that the entire output of all the steam engines and boilers in Great Britain is approximately 5,000,000-horse-power, and that the total annual coal consumption for railways and factories is 66,000,000 tons.

In other words the water-power derived from Niagara Falls is capable, could it be transmitted, of operating every manufacturing establishment and railroad in the United Kingdom of Great Britain and Ireland, and at a small fraction of the cost.

And this again is not a complete statement of the facts, for it has been found from an extended practical experience that where electrical driving is used, on the average less than one-half the power is required, for reasons given in another portion of this report.

The Aesthetic Value of Niagara Falls.

There is at the present time a movement having as its object the enactment of legislation which shall prevent the further utilization of Niagara Falls for power purposes. The movement would also logically include in its scope the diversion of water through the Chicago Drainage Canal since this also diminishes the flow of water over the Falls.

The sentiment which gives rise to such movements is so long as it is tempered by reason, admirable. There are probably few who would not consider a natural landscape more beautiful than a field of wheat, or forests than city buildings, but it is generally recognized that to restore everything to its natural conditions, if the power to do so were given, would mean the end of human progress. This question differs from the usual national park movement in that it is not a question of preserving natural scenery at the cost of a few pelts, or of a few acres withheld from cultivation, but of abandoning what is undoubtedly one of the greatest natural assets which Providence has placed at the disposal of the people, and of placing in consequence a crushing burden upon the country's development.

The price to be paid by the people for preserving Niagara Falls in its original state should be estimated in the same way as the price of any other artistic luxury. The price is, as has been shown above, not less than \$120,000,000, and is more probably above \$250,000,000 per annum, an amount larger than the total income of many countries, and equivalent to an annual tax of \$50 per head on a population of 5,000,000. It is a matter for serious consideration whether at the same cost results of more benefit could not be obtained in other directions.

The Incidental Advantages of the Use of Electrical Power.

The employment of electricity carries with it other advantages in addition to that of cheaper power, and these are, in some cases, of greater importance.

The use of electric power for street railroads and the consequent cheapness and increased rapidity of transport has, by widening out the living radius, contributed greatly to the comfort of the laboring population, and has diminished to a considerable extent, unhealthy crowding in city tenements.

In the factories themselves the use of electric motors for driving electric machinery, by doing away to a large extent with pulleys and countershafts, has made machine rooms healthier, cleaner, and better lighted.

As the result of an investigation covering more than one hundred plants, varying in size from the Baldwin Locomotive Works, down to plants employing not more than one hundred horse-power, it was found that the introduction of electric-power reduced the average power needed in factories running at varying loads to one-third of what was required when steam was used. This reduction, much greater than was anticipated, was found to be due in part to the fact that in the great majority of such factories, the power used in turning the shafting and countershafting absorbed the largest part of the energy.

Another unanticipated advantage, but one which experience has shown is a very important one, is the fact that a much greater output is obtained under the improved conditions from the same machinery, owing to the increased facility for operating at maximum output. Another is that

more machinery can be employed in the same floor space. Other incidental advantages are greater flexibility of operation, the fact that one section of a factory can work overtime without the necessity of running the entire power drive, the ease in changing the position of machinery, the saving of the floor space which would otherwise be used by engine and boiler, the saving in the cost of the heavy structural work necessary to support long lines of shafting, and the increased facilities for using cranes in consequence of the absence of much overhead shafting.

The benefits, however, are not limited to the manufacturing population. Whether small motors may or may not be usefully employed for many purposes about a farm will doubtless depend upon conditions, and in many cases this use of electricity will be of but little importance to the farmer.

The ability, however, to get farm products into market quickly and cheaply is a matter of capital importance. With the system of light electric railroads now in use in many districts, it has been found that the long drive, in many cases over bad roads, and the consequent slow delivery and waste of time on the part of the farmer and his horses, can be avoided, and that produce can be delivered not only quicker and in better condition, but at less cost, and that the time of the farmer himself and his horses is made available for other work. With this comes an increased facility in obtaining goods from town, an increase in the volume of trade, better mail facilities, a doing away with the considerable degree of isolation which necessarily obtains where there is no convenient and quick means of transport, and a bringing together of a farming body into one solid community, and a raising of the whole standard of living.

Engineering Undertaking Considered in Relation to State and Municipal Control.

It is becoming more and more generally recognized that undertakings founded on the great public needs of the highly organized society of modern times should be controlled by society. The abuses of independent control, imposing loss and injury upon the public, have been demonstrated so frequently that a large and weighty volume of public opinion has been formed which holds that it is absolutely necessary in the public welfare that municipalities should have power to control, operate, and initiate public utility undertakings.

Whether, having the power, it is advisable that municipalities should actually engage in such undertakings, or whether they should merely maintain their control, as it has been aptly put, through their powers as a landlord, is a matter which will be determined by the municipalities from political, social, and economic, as well as engineering, considerations.

Considering the question from its engineering side alone it is found that from the very essential nature of the matter only a certain class of engineering undertakings can be efficiently and properly operated by states or municipalities. It is very important that this limitation should be recognized, as where the limitation has been overstepped, it has resulted in heavy financial losses to the governing bodies immediately concerned, it has seriously checked development in engineering lines, and these results have in consequence afforded a strong argument to those opposed to municipal operation of public utilities.

The distribution of power from Niagara Falls is proposed for the reason that it is an improvement on the present methods of obtaining power. Improvements in engineering methods are, however, only made through the expenditure of large sums of money for experimental work. The original development of electrical power on a large scale at Niagara

Falls was rendered possible by the development of the two-phase induction motor. The exact figures in this case are not known, but it is believed that considerably over \$1,000,000 was spent in perfecting this invention before any return was received. To take a case from another industry; it is understood that one of the German chemical firms spent \$4,500,000 in the development of artificial indigo, and instances within the writer's personal knowledge include the expenditure of \$2,500,000 in developing a new method of making window glass, and the expenditure of more than \$500,000 in developing an electrical invention. It can hardly be questioned that the executive head of a municipality or state would not feel justified in spending several million dollars of public money in attempting to develop an engineering improvement, in view of the fact that only a small fraction of such attempts are successful.

Further, communities and their executive officers would generally lack the incentive of personal and corporate gain, especially if all similar undertakings were under state or municipal control, and would therefore to such extent be deterred from advance.

It is true that under state or municipal operation some minor and sporadic developments may be expected, but nothing of a general or important character. Important developments generally come only from the hands of individuals or bodies responsible only to themselves, and provided with the incentive of a large profit. The elimination of self-responsibility and incentive would inevitably produce a condition in industrial and scientific development analogous to the Dark Ages.

It is to be noted that this conclusion is derived from engineering considerations alone, and does not include any consideration from the political, social or economic sides. There may, it is conceivable, be political, social and economic considerations which tend to affect this limitation. Considered, however, from the engineering standpoint alone, there can be no question but that the field of state and municipal operation should be limited to undertakings in which there is no immediate prospect of, or need for, improved methods.

Is the Generation at and Transmission of Power from Niagara Falls by the Municipalities Advisable from an Engineering Standpoint?

Considered from an engineering standpoint solely, there is no reason why the municipalities concerned should not undertake the work of transmitting power from Niagara Falls. This is a case where no very marked improvement in the generation of power is possible.

It has frequently happened that broad statements to the effect that certain things were not possible have been later contraverted by the facts. In the case of the first large development power at Niagara Falls some of the most eminent experts consulted, reported that it was impossible to use an alternating current for this purpose successfully, but it is now realized that no other method would have given satisfactory results. As to the possibility of accomplishing results by a given method, prediction is always unsafe. As to the possibility of obtaining more energy from a system than is put into it there is no uncertainty.

At the present time, the efficiency of water turbines such as it is proposed to use at Niagara Falls is quite high. Future developments in turbine design may add a few per cent. to the efficiency, but there cannot possibly be any large gain, for the reason that the turbine now converts by far the greater part of the energy which is put into it. The same remark applies to the electrical generating plant since electric

generators may have an efficiency as high as ninety-seven or ninety-eight per cent. The structural work connected with the undertaking is of a kind little liable to depreciation, and may be kept up at small expense. There is comparatively little loss in the transmission lines proposed.

Whatever improvements, therefore, may be made in generating electricity from water-power, we may be sure will not be large, and this undertaking, therefore, comes within the class to which there is no engineering objection as a municipal undertaking.

Loss of Capital Through New Developments.

A danger which is always associated with the ownership of industrial undertakings is that the capital invested may be lost through the development of new, cheaper methods and processes. The extent to which industrial machinery of certain types is rendered obsolete by new improvements is not always realized. The writer is personally acquainted with one street car railroad plant in which the entire electrical equipment of the power-house was thrown out and replaced with improved machinery four times within a period of ten years. The Carnegie Company is reported, correctly it is believed, to have scrapped on one occasion more than \$1,000,000 worth of new machinery which had never been used.

This has already become a serious matter for many municipalities who have engaged in undertakings lying outside of the engineering limits defined above. Many of these municipalities installed plants for the production of electric light at a time prior to the advent of important improvements in generating and distributing electricity and as these municipalities, in common with most municipalities, made no proper allowance for depreciation, the capital invested has been practically lost, and in addition the cost of electric light to the consumer is much higher than it is in other places equipped with later and more economical types of machinery. In addition, heavy and expensive repairs have been necessary and the taxes correspondingly increased. This has reacted upon the municipalities since the heavy rates have caused manufacturers to move away to other towns, and this, again, has still further increased the burden upon those remaining. There are already indications that a considerable number of these municipalities which have engaged in improper undertakings are entering upon a period of financial difficulty.

In the case of the proposed distribution of power from Niagara Falls this danger will not occur from the reason that, as I have pointed out above, it is not possible for any great improvement to be made in methods of generating electricity from water-power as the present methods utilize all the available energy. The proposed power plant can, therefore, be safely undertaken with the assurance that there is no possibility of the plant becoming obsolete through inventions having an appreciably greater converting efficiency.

This does not mean that slight improvement will not be made, especially in the transmission system, but the cost of such changes, if it should be decided that they are advisable, should not prove a serious burden on the annual revenue.

Is the Operation by the Municipalities of Lighting Plants Advisable from an Engineering Standpoint?

Electric lighting does not, from an engineering standpoint, fall within the class of undertakings which can be efficiently and properly operated by municipalities; the reasons for this have been already given. It may, of course, be advisable for other than engineering reasons; and as a part of the proposed large development and transmission scheme, it may be justifiable.

On account of the numerous improvements which are being made in systems of electric lighting, both arc and incandescent, an electric lighting plant may become obsolete in a few years. Not only may more efficient methods of producing light be introduced, but in addition the standard of lighting may change. Within the past twenty years the following systems of street illumination have been used. These are given in chronological order as nearly as possible.

- Illumination by gas lamps.
- Siemens regenerative gas burners.
- Series incandescent lamps.
- Direct current arcs.
- Arc lamps on high towers.
- Wide carbon alternating current arcs.
- Welsbach gas burners.
- Enclosed arcs.
- Nernst lamps.
- Magnetite arcs.
- Mercury vapor lamps.
- Direct current arcs, worked from rectified alternating current.
- Impregnated carbon arc lamps.

A number of methods of lighting have been omitted, for example, the use of Jablokoff arc lamps; as these were not used to any extent in America.

The last five systems mentioned above are of recent introduction, but some of them will undoubtedly come into general use.

It is probable that no city has used all the above systems of lighting, but there are few cities which have not used at least three or four or more of them.

As an illustration of the rapidity with which improvements are made, at the time the estimates for this report were being prepared, it was decided to figure on alternating current arc operated from frequency changers, this appearing to be the most suitable and economical method. But though the estimates were prepared on this basis, the development of the mercury rectifier for operating arc lamps from alternating currents has already reached such a point as to make it practically certain that it will come into extensive use, and it is quite possible that had this report been prepared a year later this system would have been estimated on instead of the one actually taken.

The same remarks apply to incandescent lighting. Within the last few years no less than three or four different types of incandescent lamps have been introduced, including the Welsbach lamp, the tantalum lamp, the osmium lamp and the graphitized filament lamp. Some of these lamps can be used on existing circuits, and necessitate no change in voltage or the amount of copper in the distributing circuits. Other types of lamps, however, call for considerable and expensive changes.

The Engineering Features of the Proposed Undertaking.

The engineering work proposed is of a comparatively simple character. The hydraulic and electrical apparatus has been standardized. The character of the rock to be excavated for the tunnels and wheel-pits is known and advantage can be taken of the experience obtained in constructing similar works in the neighborhood.

The transmission lines are also of a type which is now standard, and there is nothing experimental about any part of the engineering work.

The site is a very favorable one, necessitating but a short length of tunnel, and there is ample water for the full amount of the power of the maximum installation proposed. The

difficulty in obtaining water which has been met with by some of the neighborhood power companies can be overcome by choosing more suitable levels.

Objection has been raised to the construction of a power-house so near the Falls on the ground that it will interfere with the scenic effect. It is proposed to meet this objection by excavating for the power-house and constructing it so that it will be below the level of its surroundings, and invisible.

Estimates of the Proposed Undertaking, Power Plant, Transmission Lines and Distribution.

The estimates for the proposed power plant have been prepared by Messrs. Ross & Holgate. These have been carefully gone over in detail with the result that it has been found unnecessary to modify them in any way. This detailed examination necessitated a visit of inspection to the proposed site as there was some doubt as to the correctness of the estimate for some of the hydraulic work, but the original estimates of Messrs. Ross & Holgate were confirmed in every particular.

While this is perhaps only what might have been expected in view of the great experience which Messrs. Ross & Holgate have had with this class of work, it is very satisfactory, and the Commission is to be congratulated on having obtained the services of these gentlemen.

The estimate for the cost of power development has been checked by the known and ascertained facts of similar developments.

As regards the estimate for the transmission lines and distribution systems, these have been checked by comparison with the figures for similar transmission lines and distribution systems now in use in a number of places.

As regards the estimates for the capital cost per horse-power generated, it is possible that they may be criticized as being too low by engineers not familiar with recent developments in hydraulic work. In at least one American installation actually completed it has been found possible to deliver power to the switchboard with a capital cost of only \$35 per horse-power, and a figure of \$27 per horse-power has been obtained at a Norwegian installation of only six thousand horse-power, though in the latter case, the conditions are hardly comparable on account of the lower cost of engineering work.

Estimate of Cost of Power.

The estimate of the cost of power has been made on a conservative basis.

The figures per horse-power year are higher than the price at which power is sold at some Norwegian power plants. This is to be accounted for by the lower cost of engineering work in Norway, and by exceptionally favorable circumstances.

On the other hand it is lower than the cost of production of many power plants in the United States, and it is probably lower than the cost at which it can be produced at most of the present power plants at Niagara Falls. This is to be accounted for by the fact that the earliest installations at Niagara Falls had additional expenses, as is the case with all pioneer work, above those necessary in the case of the proposed installation.

In this connection it should be carefully noted that no allowance for taxation was made in preparing these estimates, the undertaking being by Statute specially exempted from taxation. Ample allowances for depreciation of the power plant and transmission lines for repairs, etc., were

included in the estimates as will be seen from the tables attached to the report.

Electric Lighting Estimates.

The figures for the cost of electric lighting are believed to be conservative.

They include for the reason already stated, no allowance for taxation, but what is believed to be ample allowance for depreciation, repairs, etc., as will be seen from the annexed tables.

These figures may be criticized on the one hand as being too low. A careful consideration, however, will show that

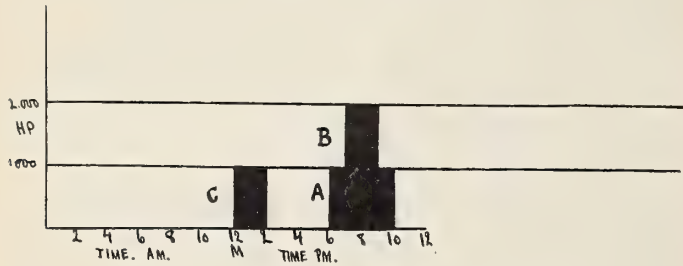


Fig. 1.

there are a number of conditions favorable to a low cost, for example, cheap power and the absence of a large central station.

On the other hand, the estimates may be criticized as being too high by those familiar with the figures given by some municipal plants, but who are not familiar with the system of book-keeping employed at these plants. Where no charge is made for water, or, as in some cases, even for labor, or for power, and no allowance for depreciation or renewals, a very low figure may apparently be obtained. Absolute reliance cannot be placed upon the figures which have been published as to the cost of electric lighting in municipal plants.

Load Curves.

It is not possible to determine from engineering considerations the price which should be paid by consumers for power in any case met with in practice. More especially is this impossible in a case such as the one under consideration, where the capital costs amount to almost the entire cost of power.

This is for the following reason:—

If there were but a single consumer and he used the block of power represented by the square A in Figure I, the question would be a simple one. If he used a thousand horse-power, the company would have to supply the apparatus necessary to furnish that thousand horse-power, and the capital cost of this apparatus and of the labor, etc., would be easily calculated.

In an installation of the proposed type it would make very little difference whether he used that power for one hour or twenty-four hours, since the plant must be there to furnish power, and the capital charges go on just the same whether the power is being used or not.

Supposing another consumer were to take power represented by the block B. Between the hours of seven and nine

the company would be furnishing two thousand horse-power, and consequently the cost to the company practically double what it was before. If, however, the second customer instead of using his power as shown by the block B, used it between the hours of noon and two p.m., as shown by the block C, the company would be at no additional expense for the same apparatus which supplied the first customer between the hours of six and ten p.m., could supply the second customer between the hours of noon and two p.m., and the additional labor cost would be very small.

Consequently, if the company had a consumer taking power represented by the block A, it could afford to supply power to a customer taking the block C at a comparatively low rate, since the company would be at no appreciable additional expense.

In England, and in other countries, a great variety of plans have been tried at one time and another; for example, what is known as the maximum demand method, and the method of making a lower price for power used between certain hours of the day. This subject is a very complicated one.

Broadly speaking, however, the general object of the manager of the power company is to flatten his load curve as much as possible by finding new uses for power during the hours of light load.

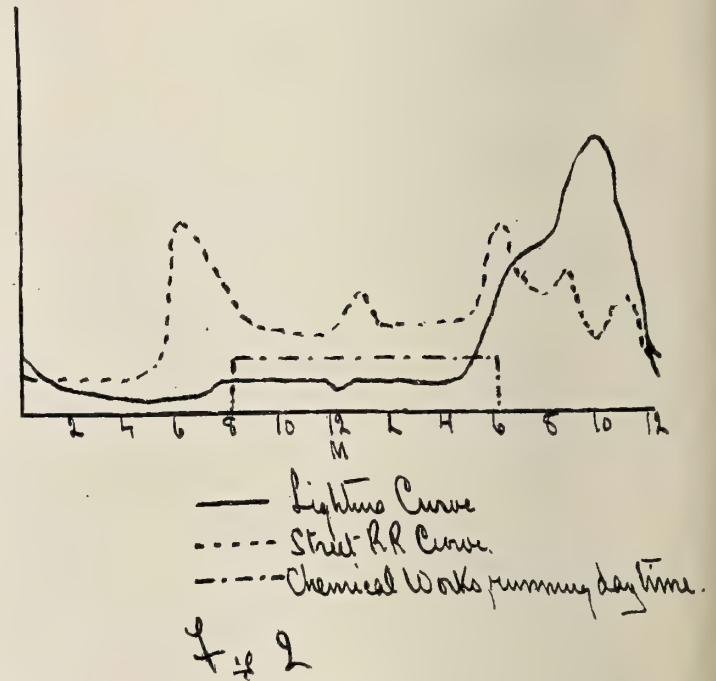


Fig. 2

The question of heating by electricity has always attracted considerable attention in this connection, and as regards the heating of houses and light cooking, there is undoubtedly a considerable field for electricity. Unfortunately, however, electricity is unsuited for heating water, as water has a very high specific heat. It is possible that in the near future a combination system may come into use in which coal is used for heating water and for heating apartments which must be kept warm during the entire twenty-four hours, and electricity is used for such cooking as does not necessitate heating water, and for heating rooms which are only used during a small part of the day.

REGINALD A. FESSENDEN.

REPORT OF ROSS AND HOLGATE,

Consulting Engineers to the Ontario Power Commission, as to Power Users' Requirements and Cost of Power.

SCOPE OF ENQUIRY.

We were instructed that this report should include an investigation of the power requirements for all municipal, manufacturing and general motive power and lighting purposes within the limits of the seven municipalities of Toronto, London, Brantford, Guelph, Stratford, Woodstock and Ingersoll, and should set forth the capital and yearly costs per horse-power for a power development suitable for their requirements, and the transmission and distribution costs of same, together with information relating to the present cost of steam power in the districts.

We have not, however, confined the report within these limits, but have extended it beyond the seven to include eleven additional municipalities, with a population of 2,000 or over, which are within easy transmission distance of the original seven. These are as follows: Hamilton, St. Thomas, Paris, Dundas, Mitchell, St. Mary's, Berlin, Waterloo, Preston, Hespeler and Galt.

In addition to the extension of the number of municipalities beyond those which we were instructed to investigate, we have estimated the capital costs of generating plants at four separate sites at Niagara; and we have estimated the cost of the development and transmission of power from two of these, not only on the basis of the present requirements of these eighteen municipalities, but also allowing for their future expansion. We have thus worked out the capital and operating costs in full for a 30,000 h.p., a 60,000 h.p. and a 100,000 h.p. development.

This extension of the investigations beyond that which we were instructed to make has more than doubled the estimating involved, but we believe that the value of this report is greatly increased thereby.

The scheme of arrangement adopted throughout this report is as follows:—

- (1) A consideration of the power demands of the municipalities.
- (2) An investigation of the power sites available.
- (3) Capital costs of developing, transmitting and distributing power.
- (4) Operating costs per-year for developing, transmitting and distributing power.
- (5) Yearly costs of transmitted power at customers' premises.
- (6) Yearly costs of steam power for various sizes of plants.
- (7) Yearly costs of gas power for various sizes of plants.
- (8) General conclusions.

Investigation of Requirements.

The investigation of the requirements for power, not only for municipal, but for manufacturing purposes, within the bounds of the seven municipalities interested, was carried out through a canvass by a staff of engineers, with headquarters in Toronto, every power user being visited and his power requirements ascertained to the fullest degree possible, the information being entered upon data sheets, which were then transferred to the head office in Montreal, where the whole was worked up into the final tables herewith presented and divided among classes of users as shown.

It was found that the vast majority of power users assisted the canvassers, and gave free access to information relating to their requirements. In a few cases, however, such

facilities were not accorded, but allowances were made to cover these, so that it is confidently believed that the canvass made covers thoroughly the requirements for power for all purposes within the seven municipalities interested, and in the case of Toronto within its suburban districts also.

These enquiries were adapted to the separate conditions of both steam plants and electrical plants, as the data required in each case varied. In addition to the actual horse-power capacity and consumption, notes were taken on related matters, such as costs of coal, probable increase of power in the immediate future, methods of heating and lighting the premises, uses of exhaust or live steam for heating or for industrial purposes, the amount of shavings or other refuse which were available for fuel, all of which vitally affects the market for power. No separate canvass was made of the requirements of the eleven additional municipalities, but they were carefully estimated from appropriate comparisons made with the known conditions in the original seven and from lighting data procured from Government reports. It is believed that a fair estimate has thus been made of the requirements of the eleven additional municipalities.

Present Horse-Power Ratings on Plants Installed.

In Table 1 is shown the horse-power ratings of plants installed at present in the seven municipalities for manufacturing, power and lighting, divided into boilers, engines generators, motors and gas engines. A column is also inserted showing average loads. These loads were obtained under actual investigation of the plants visited from statements of proprietors or engineers, and from indicator cards, electric meter readings and meter accounts.

A column headed "Future Requirements" indicates what, in the opinion of the interested parties, their requirements will be within two years. This last column, therefore, shows what the power requirements within the bounds of the seven municipalities should be by the time a generating and transmission plant could be constructed to meet their demands.

It will be seen from the tables that if all the requirements within the seven municipalities were met by the use of transmitted power, 87,883 horse-power would require to be delivered. This, however, is in excess of the transmitted horse-power which might be anticipated to be sold owing to certain conditions of manufacturing, which would render it uncommercial for certain plants to use transmitted power.

It may be noted that while 78,592 rated horse-power of engines is installed that the present loads are 73,631, indicating that the full capacity of installed engine plant is being utilized. Upon a study of the requirements of purely manufacturing companies, apart from street railway, lighting and water companies, it is found that for these alone the average loads average about 75 per cent. of the rated horse-power of the engines.

It is, therefore, necessary to estimate from the said table what amount of power might be anticipated to be commercially available as a market for transmitted power, and to obtain a basis for estimating these requirements, the present total demands have been divided into several classes.

Available Power Market, Seven Municipalities.

Having shown in Table 1 the rated horse-power of the various engines, boilers, gas-engines, etc., and their average

loads, the question arises as to what proportion of these plants may be estimated upon with certainty as being customers for the transmitted power, provided that power be delivered at fairly low rates, such as may be anticipated to be probable if power be obtained from the operating commission. Several considerations will affect the results vitally. So far as plants at present using electric motors are concerned, these form a readily available market. Of those using steam power at present and having no additional or supplementary demands for steam, a large portion should come within the class which cannot afford to ignore the offers of transmitted power. Similarly, central electric stations may also be considered as available customers. On the other hand, where steam is used for industrial purposes other than for power, or where the exhaust steam from the engines is used for heating in winter time, the use of transmitted power becomes less desirable from the point of view of the customer, as in many cases steam will have to be maintained for heating during the winter, and perhaps continuously during the year for dyeing, steaming and other industrial purposes. Further, in many places by-products, such as shavings and wood scrap, are available for the production of a certain portion of the steam required for power, thus limiting the market. The use also of oil and gas engines is to be considered, and especially the latter if of a modern type, using producer gas, are more easily and cheaply operated than steam plants of similar size, and consequently there is less probability of their changing their motive power. In order, therefore, to enable a fair estimate to be made of the market available to the Operating Commission, we have separated in Table 2 the power demands into groups as below:—

- A. Those using stationary electric motors at the present time which may be readily obtained as a market.
- B. Those using steam-driven plants of various kinds and sizes for industrial purposes, such as in mills, etc., where the engine is belted directly to the shafting.

This covers the larger part of what may be called the industrial plants as distinguished from electric power stations, etc. These plants are operated, generally speaking, ten hours per day.

From Class B has been excluded those using steam for industrial purposes other than the generation of power.

- C. Under this classification has been included 24-hour public service plants, such as electric generating plants and pumping stations.
- D. Includes such steam plants as, in addition to demands for power, also require steam for other industrial purposes, and also those using, in whole or in part, refuse as fuel.
- E. Includes plants using oil and gas engines. There should not be much difficulty in displacing a certain portion of these, especially where producer gas is not used.

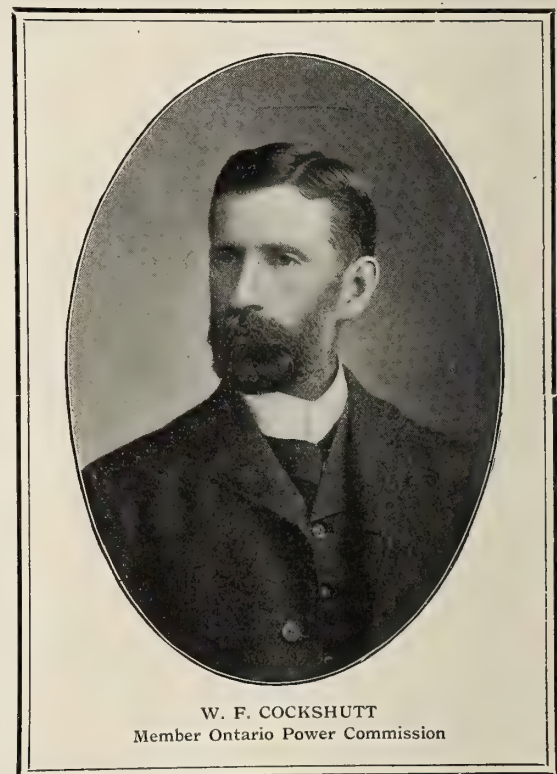
In dealing with this question of the available market, practically each plant was considered by itself, so that the results as shown in Table 2 may be taken to indicate conservatively the amount of power which is certainly available as a market, and which can in all probability be captured.

It will be seen in this connection that while the probable demands for power are shown in Table 1 as 87,883 hp., the actual present market contemplated as certain to be captured is only 55,556 h.p., as indicated in Table 2, or, in other words, a little over 60 per cent. of the total probable requirements is taken as a basis for the following estimates of the market.

In this it will be noted that no allowance has been made for new industries, nor for the natural growth of the present industries except that contemplated in Table 1 under the heading, "Future Requirements," wherein the probable increased future demands of the present plants are allowed for to cover two years to come, or practically only until such time as the transmission plant shall be constructed and in operating condition. In this and all other tables the word horse-power is used in the sense of the average input of power measured at consumers' premises, or the average power developed or transmitted to obtain such power at customers' premises.

Power Market Available in Eighteen Municipalities.

In Table 3 is shown the power which it is considered the Operating Commission should be able to sell in eighteen municipalities, provided its power rates are such as would render it inadvisable to continue the general use of steam



for power purposes. This table excludes the demands of special cases, such as where large amounts of refuse have to be destroyed, or where steam is required largely for other industrial purposes.

Table 3 is derived from Table 2 so far as seven municipalities are concerned, except that in making up the last column for the seven, certain deductions and additions were made to cover a reconsideration of special cases of individual plants.

For this reason it will be found that the last column in Table 3 does not agree with that in Table 2 in certain small particulars. The last part of this table, dealing with the eleven additional municipalities considered, has been estimated as already described. Considering, therefore, practically all of the municipalities between London, Niagara and Toronto of two thousand population or over, within fair transmitting distance of the main lines, there is a market available which should be capable of being captured by transmitted power at fair rates of 81,125 h.p.

Power Developments Required.

From the above-mentioned tables for the seven municipalities the power readily available by transmission is 55,325 h.p., while for the eighteen municipalities under the same conditions there is required 81,125 h.p. Premising that only seven municipalities become interested, it could not be anticipated that the whole of the 55,325 h.p. could be captured at once. It, therefore, becomes advisable also to consider the costs of the development and transmission of a certain portion of the latter figure. We have, therefore, in Table 4 assumed that only one-half the requirements shown would be connected within the first few years. This leads to the consideration of the development, transmission and distribution of three amounts of power.

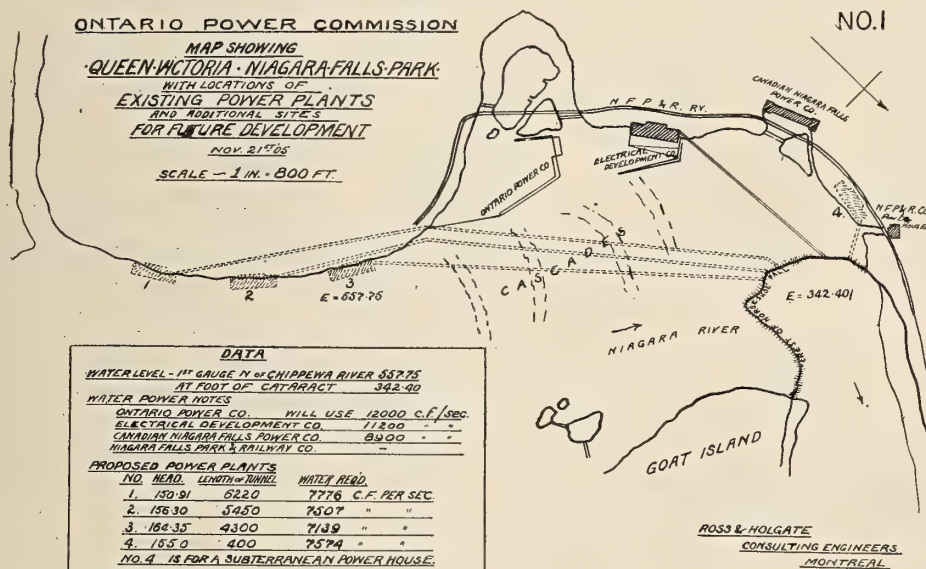
If to the power required by the municipalities be added the losses in transmission and distribution we have the necessary development at the generating plant to lay down the required power under the three conditions.

These three developments we have designated throughout this report as follows:—

Development "A" indicating half requirements of seven

station for transmission purposes. There are also several developments under contemplation, involving canals across the Peninsula and permitting of generating stations being placed along the Ontario escarpment.

Inasmuch, however, as the cost of development of these latter powers is somewhat obscure without an investigation, which would take more time and money than is available to this Commission, and inasmuch as the Niagara Falls Park Commissioners have within their gift at least four other sites above the Falls, the development, conditions of which are similar to plants already constructed, and of which the costs may be very nearly estimated, it is considered advisable for the purpose of this report that such powers be estimated upon as are available above the Falls, and which are within the gift of the Park Commissioners, and for which it is assumed that the Commission would pay the same rentals as the companies already existing. There are also the powers available in the gorge below the Falls within the gift of the Park Commissioners, but these, owing to their difficult hydraulic construction and violently fluctuating heads, are not to be considered while there are still power sites available above the Falls.



municipalities, or nominally about 30,000 horse-power at the Niagara terminals.

Development "B" indicating full requirements of seven municipalities, or nominally about 60,000 horse-power at the Niagara terminals.

Development "C" indicating the full requirements of eighteen municipalities, or nominally a 100,000 horse-power development.

This fairly indicates the growth of demands upon a plant which had been laid out originally to cover the total requirements.

Water Power Sites Available.

The only practicable water powers available for this district are within the Niagara Peninsula and generally at Niagara Falls itself, although other powers are, or may be made, available between Niagara and Hamilton. At Niagara Falls, on the Canadian side, there are already three developments under construction, and these three companies have obtained rights from the Victoria Niagara Falls Park Commissioners for power varying from 100,000 h.p. to 225,000 h.p. At Decew Falls the Cataract Power Co., which supplies Hamilton and vicinity, have also established a power

The accompanying map, No. 1, shows the four available sites which are considered in this report. Of these, Nos. 1, 2 and 3 involve the construction of very long tail tunnels up the centre of the river, and similar to but longer than that already constructed so successfully by the Electrical Development Co. Site 4 is one which permits of a very short tail tunnel at correspondingly decreased cost, and it is this development only which is finally considered in this report. The four developments would be practically identical in every respect, except as indicated above, due to the increased length of the tail tunnel, so that, having worked out the capital costs of one of these, the others are readily obtainable by the addition of the necessary cost of the tunnel. These additional costs are summarized in Table 8.

Special Note.

Since writing the above and completing our calculations of costs based on a development at site 4 we have been informed that the Park Commissioners are disinclined, for scenic reasons, to recommend that any development be allowed at the said point. In this connection we would point out that the site in question is especially recommended by Mr. Isham Randolph, C.E., in his report to the Park Com-

missioners of the 4th of April, 1903, and published in the seventeenth annual report of the Commission. This particular recommendation, which points out that the necessary structure "could be an ornamental, even a monumental, structure," may be found on page 98 of said report. With reference to this site the Commissioners say in their official report: "Mr. Randolph's report . . . demonstrates very clearly . . . that there are several points where power may be developed . . . one of the locations . . . is quite close to the Falls . . . but the power house is designed to be subterranean, and nothing but a small building to enclose an elevator would appear on the park surface." (Vide p. 14, 17th Annual Report.)

We have also been recently informed that another company has advanced claims, which, if conceded, would interfere with a development at this point. These claims, however, we understand, are not conceded, but are disputed, and, inasmuch as the development at Site 4 is the one which we recommend for a municipal development in priority to all others, it would seem to be hardly fair to abandon its consideration merely because of a dispute of unknown value with another company. In view, however, of the facts above mentioned, we have also estimated upon the yearly costs per horse-power at Niagara, at the municipal sub-stations and at the consumers' premises of the power developed from Site No. 3, which is the next cheapest possible development.

Capital Costs.

Throughout this report capital costs have been considered to consist of the following items:—

- 1st. Costs of labor and material required for construction, with allowance for contingencies.
- 2nd. Allowance for engineering, legal and business expenses during the period of construction.
- 3rd. Interest during construction period upon the bonds issued to meet construction cost.
- 4th. Sinking fund instalments covering construction period.

As of necessity capital costs for the purpose of this report are first required, they will be considered first for the whole construction, from the power development to and including the delivery at customers' premises.

Niagara Plant Development, "A," "B" and "C."

Development No. 4, which places the power station near the brink of the Falls, is made closely along the lines of those of the Canadian Niagara Power Co. and the Electrical Development Co. on the Canadian side, and of the Niagara Falls Power Co. on the American side. These plants have been thoroughly studied out. Two of those on the American side have been in operation for some years, while the Canadian Niagara Co.'s plant has just begun operation.

There is, therefore, a large amount of data available regarding these plants already constructed which renders the selection of a scheme of development safe, and the cost of same readily determinable, leading, therefore, to reliable results in the capital costs, which are given below.

In the general scheme of development, as outlined in Table No. 5, it will be noted that, as regards the sizes and capacity of units and the general lay-out, it is very similar to developments already in operation, and no features are introduced which are new or experimental, but are based upon actual present and successful construction, as exemplified in existing plants at Niagara.

Table No. 7 summarizes the costs of development at Site No. 4 under the headings, "Developments "A," "B" and "C." In making these estimates it has been considered that the water development and hydraulic construction would be practically completed for development "C," and utilized for developments "A" and "B," which are, therefore, chargeable with practically the whole of the capital costs of the hydraulic development for the larger scheme. The rest of the plant for which capital costs are shown are chargeable with their proportion of the machinery and buildings required for their particular development. In other words, the hydraulic development would be laid down for development "C" in the beginning, and water wheels, generators, transformers, switchboards and buildings constructed as required. To each item has been added a considerable percentage for contingencies, which are considered as being heavy for hydraulic development and very much lighter for machinery, for which prices are well standardized. It will be noted that to the total capital outlay interest for $1\frac{1}{2}$ years at $4\frac{1}{2}$ per cent. has been added to cover the interest accruing to the construction period, which is estimated to occupy from two to three years. The rate of $4\frac{1}{2}$ per cent. is that which we have been instructed by the Commissioners to use. A sinking fund allowance has also been added for construction period at a rate which would retire the bonds in forty years from the beginning of construction operations. These two items, together with engineering, legal and business expenses, when added to the actual investment in labor and material, make up the total capital costs for the three developments.

Capital Costs Transmission Lines.

The transmission lines have been laid out as shown on accompanying map, No. 2, on which the full lines indicate 60,000 volt transmission tower lines to the seven interested municipalities, the dotted lines representing 10,000 volt transmission to the remainder of the eighteen municipalities, which are not on the direct lines of the original seven; each full line represents a separate line of towers, each supporting two circuits of three cables each, so that between Niagara Falls and Hamilton there will eventually be eight three-phase copper lines, between Hamilton and Toronto four. This is for the full 100,000 h.p. developed at Niagara Falls. For one-half the power, one-half the copper and a corresponding decrease in towers is allowed. In addition to the main transmission lines, which operate at 60,000 volts, and in order to include the additional municipalities, it is necessary to provide subsidiary transmission lines in two places, as indicated on the map, which shows Stratford as a centre of the subsidiary distribution, supplying St. Mary's and Mitchell at 10,000 volts and Guelph as the second centre, supplying Waterloo, Berlin, Preston, Hespeler and Galt at the same voltage.

It will be noted that while a number of smaller municipalities are included within the dotted circles surrounding those towns, that only those of a population of 2,000 and upwards are considered.

In addition to these subsidiary transmission lines there is an extension shown from London to St. Thomas of the 60,000 volt lines.

By the selection of these routes and subsidiary transmissions it has been possible to include nearly all the municipalities between St. Thomas and Toronto with a population of 2,000 or over, and as in addition to the eighteen municipalities there are a number of smaller ones within reach, it is felt that the transmission routes taken will meet the requirements of the most important part of the peninsula with the least possible expenditure.

The capital costs have been figured (see Tables 9, 10 and 11) as in the case of the Niagara development for developments "A," "B" and "C" at Niagara, and these costs there shown are those necessary for the commercial transmission of the power to the different municipalities under the three conditions of development.

For convenience of expanding costs the lines have been divided into "Niagara-Toronto Line" and "Niagara-London Line," as the requirements of Toronto alone demand separate circuits, while on the Niagara-London Line are connected all the other municipalities.

In all cases for the 60,000 volt lines the right-of-way is considered as having been purchased and fenced, while as regards subsidiary 10,000 volt lines, pole placement rights only have been considered. Although in many cases it will not be necessary to purchase outright rights-of-way through certain districts, it is deemed advisable to consider this as being necessary for the purpose of an estimate.

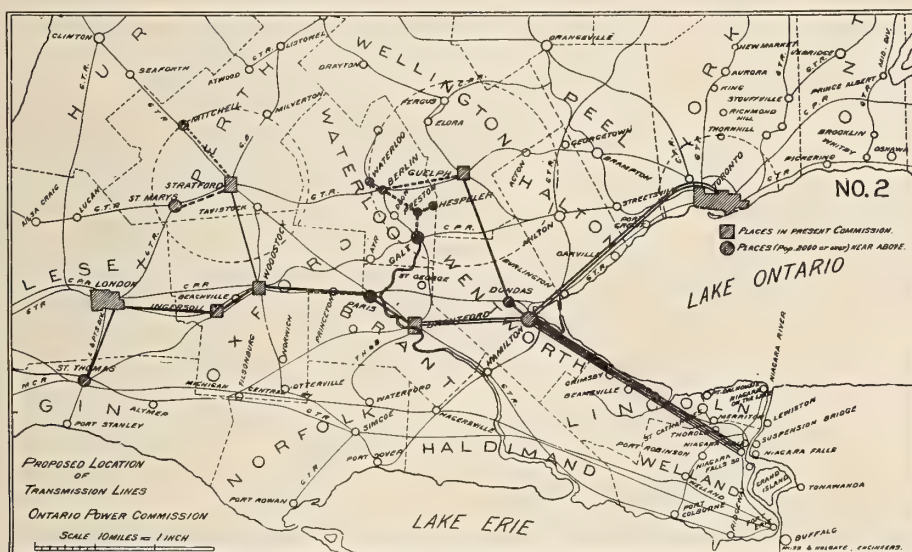
The line construction for the 60,000 volt lines will be similar to that already in progress between Toronto and Niagara, as it has practically become standardized for high

A telephone line is provided, mounted on separate poles, and placed so as to be as free as possible from inductive influences and from possible contact with the high voltage lines. In most places it would be advisable to run this telephone line along adjacent highways rather than on the right-of-way of the main transmission line.

In Tables 9 and 10 are shown capital costs of the transmission lines for developments "A" and "B," while Table 11 shows cost for development "C," and includes the St. Thomas extension and the Stratford and Guelph sub-systems. To the total costs of construction has been added the usual allowance for engineering, legal and business expenses, and interest and sinking fund for one year, on the assumption that a total of two years would be required to complete the construction.

Capital Costs Municipal Sub-stations.

Power having been laid down at the end of the transmission line at each municipality at 60,000 volts, it becomes necessary to transform it to a voltage suitable for distribution. In all municipalities except Toronto the voltage is



voltage construction for large powers. Towers resembling those in use for windmills are used instead of wooden poles, each one designed to carry two three-phase circuits of 60,000 volts, to be constructed of galvanized steel angles, bolted and braced, of sufficient height to clear such obstacles as may be met.

These towers will be erected on the ground and the legs sunk therein about six feet, each foot resting on a solid cedar block; concrete foundations will be used wherever required. Special designs will be used at the crossing of the Welland Canal, the height being such as to admit of the passage of vessels.

The copper for these lines has been designed for a 10 per cent. line loss to Toronto and the same to the centre of distribution on the London line, and all for a power factor of 80 per cent. and a delivery voltage of 54,000. These lines have been arranged to operate in parallel, and enter and leave each sub-station in such a way that sectioning of the line is obtained to permit of any section being cut out for repairs without crippling in any way the rest of the circuit.

The necessary disconnecting and sectionalizing switches have been considered to be a part of the line, and are included in the capital costs of the same and not in the sub-station costs.

transformed from 60,000 to 2,200 for local uses; in Toronto, however, owing to the great area to be covered, it is deemed advisable to distribute from the 60,000 volt sub-station at 10,500 volts to three subsidiary stations from which distributing lines issue to the streets at 2,200 volts as shown in Map No. 3 as attached. At Guelph and Stratford, in addition to the local requirements of 2,200 volts, provision is also made for a reduction of voltage to 10,000 for transmission to their respective sub-systems.

The data upon which these municipal sub-stations have been worked out is given in previous tables, in which are indicated the horse-power delivered to each station and sub-station. The sub-stations are considered as distinct from the distributing stations to follow, but in figuring operating costs these sub-stations are included as part of the line, and considered as being under the charge of the Operating Commission. A diagrammatic plan, No. 4, is attached, showing a typical sub-station lay-out.

In the capital costs shown in Table 12 ample allowance has been made for land, foundations, buildings, switchboards, transformers, etc., at present prices, with an allowance of 10 per cent for contingencies, 10 per cent. for business, legal and engineering expenses, and the usual interest and sinking fund charges during construction period.

Distributing Stations.

Distributing stations herein considered are such as would take the place of the present lighting and power stations in municipalities supplied, and in addition to what is already furnished by these present stations the power necessary to cover the entire demands of the municipality for all purposes, both municipal and private, it being considered in every case that the requirements of the municipality for arc and incandescent lighting will be the same, whether developments "A," "B" or "C" be considered; whereas, as regards the motor loads, these have been considered to be the difference between what is required for lighting and what is available under the three developments at the municipal switchboards. In other words, the lighting demands are constant for all developments; the motor load is considered as decreasing as the power delivered decreases. This is shown in Table 6 attached, in which table is indicated the number of incandescent and arc lamps estimated upon as necessary and the motor horse-power available for sale. As regards the motor loads, these have been obtained from a careful canvass of the seven municipalities. The incandescent and arc loads have been obtained wherever possible from the lighting companies. In certain cases it was impossible to obtain these direct from the companies, in which cases other sources of information have been utilized, such as Government reports relating to electric lighting. In every case it has been considered that the distributing voltage in each municipality for incandescent lighting and motors is 2,200, and that arc lighting is done in accordance with modern practice by means of series alternating arc lamps, and the capital costs shown in Tables 13, 14 and 15 include the necessary distributing station, which is considered as being located immediately adjacent to the 60,000 volt sub-stations, with all the controlling switchboards, frequency changers, series arc transformers, etc., contained therein, together with the overhead distributing lines in the municipality and the necessary street transformers and meters for incandescent lighting and motor transformers for motor service, and also all series lines and arc lamps. In other words, the capital costs under these headings include everything necessary for the distribution of arc, incandescent and motor power from the transmission sub-station in each municipality by overhead lines to the customers' premises, including meters and transformers, and service lines thereon, but not motors. In addition, the usual allowance of 10 per cent. for engineering, legal and business expenses; 10 per cent. for contingencies and interest and sinking fund for one year are added, it being considered that the whole construction period would be two years. A print, No. 5, is attached, showing diagrammatically the lay-out of one of the Toronto sub-stations as an example.

Capital Costs Summary.

In Table 16 are given the total capital costs for developments "A," "B" and "C," these being a summary of previous tables, and include, therefore, everything from the development at Niagara to the customers' premises in the case of the seven municipalities, and to the distributing stations of the eleven additional municipalities.

Capital Costs Apportionment to Municipalities.

In Table 17 the capital costs are apportioned between the municipalities affected as follows:—

(1) The total cost of development "A" and "B," respectively, including transmission and distribution, is apportioned between the seven municipalities directly represented in the Commission.

(2) The total cost of development "C," including transmission and distribution, in the case of the seven municipalities directly represented in the Commission, but excluding distribution in the case of the additional eleven municipalities, is also apportioned between them.

This apportionment has been made under the instructions of the Commission on the following principles:—

- 1st. That each municipality is chargeable with that proportion of the capital costs of the development at Niagara that the horse-power required by that municipality at Niagara Falls bears to the total requirements.
- 2nd. That each municipality is chargeable with the cost of the transmission lines which are common to all in proportion to the horse-power demanded by, and to the distance from Niagara of, that municipality.
- 3rd. That each municipality is chargeable with the total cost of any subsidiary transmission line which is installed solely for the use of that municipality.
- 4th. That each municipality is chargeable with its own sub-station equipment, buildings, land, etc.
- 5th. That each of the seven municipalities is chargeable with the total cost of its own distributing station and distributing system.

In Table 18 for convenience is shown the apportionment of the capital costs of development and transmission (only omitting the costs of distribution in the seven municipalities in which distribution has been considered previously), thus showing the amount of capital investment required, exclusive of distribution, separately from that required, inclusive of distribution.

Annual Costs of Power.

To determine yearly the cost of power under developments "A," "B" and "C," for which the capital costs have been estimated as above, it becomes necessary to consider:—

- 1st. The capital charges, including interest and sinking fund.
- 2nd. Operating costs, including wages, supplies, repairs, etc.
- 3rd. Management and general expenses.

Interest.

Throughout this report it is assumed that bonds will be issued to cover the total costs shown, and under the instructions of the Commissioners the interest thereon has been taken at $4\frac{1}{2}$ per cent. yearly; and it will be noted in previous tables that the interest on bonds during construction has been charged to capital costs, and only after the plant is in operation is interest considered as chargeable to the yearly operating costs.

Sinking Fund.

The yearly costs have been charged with a sinking fund which will retire the bonds issued to cover capital expenditure in forty years. The Operating Commission will then have the original plant in good condition, free of debt, having retired all its bonds out of income.

Maintenance.

Maintenance is considered as being the amount necessarily spent in repairs to enable the plant to be kept in good operating condition to the end of the forty year period, for which bonds will have been issued, so that at the end of that period it may be operating in practically as good condition.

dition as when originally installed. The Municipal Power Works Act directs that improvements which may become necessary shall be made out of "general funds" in the event of such being available for the purpose, and, failing such, by the issue of "special bonds" to cover the cost thereof. Pursuant to this direction the operating costs have not been loaded with the capital cost of replacing plant, which, because of possible antiquation, may require to be replaced by newer types of apparatus. It is, however, believed that in the event of such expenditure being required the cost thereof will be returned to the "general" funds of the Operating Commission by the consequent saving in operating costs. Under these conditions various maintenance rates are assumed on the capital costs, from $1\frac{1}{2}$ per cent. on hydraulic developments and buildings and 5 per cent. on running machinery, switchboards, etc., up to 10 per cent. on arc lamps, etc., and the amounts derived thereby are as shown in the tables.

Supplies.

Supplies in every case are a pure estimate, based upon experience, and sub-divided under the different items in

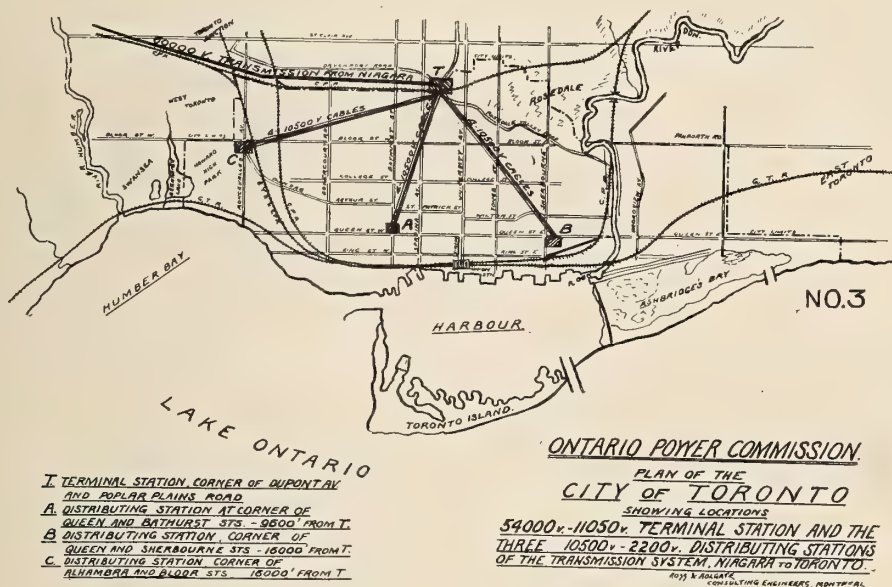
tion the latter to arc lighting, incandescent lighting and motor service.

It will be seen, therefore, that all the items entering into the cost of power are properly sub-divided among the different services, and that practically only general expenses have to be divided in an arbitrary way between these services.

The yearly costs are calculated under two main heads, viz.:—

- 1st. Those arising out of the development and transmission of power, operation of sub-stations, etc.
- 2nd. Those arising out of the individual, municipal, subsidiary distribution, and which are divided between arc, incandescent and motor services.

As regards the management costs for the development and distribution, these are also distributed in what is considered a fair way between the development and distribution services. It is, therefore, possible to separate the yearly charges at Niagara Falls for power from those at the municipal sub-stations. The tables below are arranged so as to



accordance with fairly well-known practice. The larger items, such as carbons and lamps, can be figured quite closely. The smaller items, such as oil, waste, etc., are approximated.

General Expenses.

General expenses have been considered as including all remuneration and expenses for salaries, general office expenses, traveling expenses, etc., which cannot be apportioned definitely to any particular section, and which, therefore, must be split up in certain arbitrary ways, so that each service shall be chargeable with a fair amount. The loading for salaries is sufficient to cover a business-like allowance for Operating Commissioners.

Wages.

Wages are taken at the current rates for all classes of service and apportioned between the different demands, according to their requirements; and, generally speaking, it may be said that each service has its own wage list pretty clearly defined, so that it is possible to separate accurately the charges under this head for the separate service, such as development, transmission and distribution, and to appor-

indicate clearly the costs of power per horse-power year as follows:—

- 1st. At the outgoing terminals of the generating station at Niagara.
- 2nd. At the outgoing terminals of the sub-stations at the municipalities.
- 3rd. At the consumers' premises in the municipalities for arc, incandescent, and motor services.

Annual Costs at Niagara Plant.

In Table 19 is shown the annual costs of power at Niagara under developments "A," "B" and "C," the whole figured on the general lines indicated above for operating and fixed charges. The only special item claiming attention is that pertaining to the rental of power. As mentioned previously, the Park Commissioners have established standard rates per horse-power for all power developed within the boundaries of the park, and we have loaded these costs with the same rental that is paid by the present companies already established at Niagara. These rentals are as follows, and are taken from the published agreement between the Queen

Victoria Niagara Falls Park Commissioners and the Ontario Power Co., of Niagara Falls:—

Up to 10,000 h.p. minimum rate of \$15,000 per year.

2nd. 10,000 h.p., \$1 per electrical horse-power per year.

3rd. 10,000 h.p., 75 cents per electrical horse-power per year.

4th. 10,000 h.p. and all subsequent power, 50 cents per electrical horse-power per year.

From these figures the third line in Table 19 has been computed. The totals shown in that table indicate the yearly cost of operation, not only of the water-power station at Niagara, but of its 60,000 volt sub-station, situated on the bluff within 1,000 feet of the hydraulic development, which is considered throughout this report to be a part of the development, and the expenses of the Operating Commission.

Annual Costs, Transmission Lines and Sub-Stations.

Table 20 indicates the yearly operating costs for, and fixed charges on, the transmission lines and step-down sub-stations at the various municipalities, wherein the transmitting voltage is reduced from 60,000 to 2,200 for distribution in the smaller municipalities to 10,500 for distribution to the transformer sub-stations in Toronto, and to 10,000 for the subsidiary transmission lines surrounding Stratford and Guelph, together with the fixed and operating costs chargeable to the 10,500 volt sub-distribution in Toronto and the 10,000 volt distribution from Guelph and Stratford. These items cover all the necessary wages for maintenance and inspection of these lines, for the operation staffs at sub-stations, with the proper allowance for supplies, and a fair allowance for general expenses, but include no allowance for the municipal distribution, which is treated separately in tables to follow.

Annual Costs Distribution Plants.

In Tables 21, 22 and 23 are shown the annual charges involved in distributing power and light to consumers. To these charges the cost of power at the outgoing lines of the 60,000 volt station, to which the municipal station is immediately adjacent, must be added. Entirely new distributing systems as already explained are assumed, no consideration being given to any existing distributing system in such municipalities. Consumers, therefore, are chargeable with fixed charges on an entirely new and modern distributing plant, and the operating costs of same based on modern conditions. These costs are apportioned accurately between the different services, except in the case of management and some wage expenses, which have been apportioned arbitrarily as appeared fair.

It is understood, therefore, that these tables above mentioned indicate merely the annual costs of operating the distributing systems apart from the cost of power at end of transmission line, that cost being added in later tables.

It will be noted also that, for reasons already given, distribution costs have only been figured for the seven municipalities represented in the Commission.

Arc Lighting.

In Table 21 are shown the total annual distributing costs for arc lighting, apart from the cost for power. They include the fixed charges upon such apparatus as is devoted exclusively to their use in the streets and sub-stations, and a fair apportionment of such apparatus as it used in common for all services, such as switchboards, etc.

In the operating costs are included a fair apportionment of general expenses and common wages, together with an allowance for trimming, carboning and repairs to arc lamps,

and in the item "Supplies" is included carbons, globes and small supplies.

It is assumed that an all-night service of 480 watt series alternating current lamps is furnished in accordance with modern practice.

Incandescent Lighting.

The annual cost of this distributing service for seven municipalities is shown in Table 22, which does not include the cost of power, this appearing in later tables.

The fixed charges have been estimated on such apparatus as is entirely chargeable to the incandescent service and proportionately to the investment in apparatus common to all services. The same remarks apply to wages and general expense.

Supplies, including incandescent lamps, which are assumed to be replaced free of charge by the municipalities, are included in supplies.

Maintenance has been allowed for very liberally, owing to the rapid deterioration of poles, wire insulation, house service and meters.

In the above it is assumed that a 24-hour service is maintained.

Annual Motor Power Distributing Costs.

In Table 23 is shown for the three developments the annual costs for distributing motor power throughout the municipality. As previously stated, the actual cost of power is not included herein, and the sale of motor power is considered to be the difference between the power laid down at the municipal sub-station under the three developments and that required for arc and incandescent demands, which are assumed to be fixed and identical for each development.

The justification for the above assumption is to be found in the fact that whether a large or small amount of power be purchased by the municipality, a definite amount is necessary to accommodate the present arc and incandescent lighting, and only the remainder is available for sale to motor users. It is assumed that all motor power will be operated at 25 cycles, thus eliminating the use of frequency changers for this service.

Copper and transformers for distribution, therefore, are kept separate, the fixed charges on these being charged to motor service costs direct. In the case of apparatus common to all services, fixed charges, of course, are divided, generally speaking, in proportion to the horse-power required for the several services.

Total Annual Costs of Power.

From the preceding tables relating to capital costs and annual operating charges the total costs of power are given in Tables 24, 25, 26, 27 and 28 for:—

- 1st. The cost of power at Niagara.
- 2nd. The cost of power at the transmission sub-station at the municipality.
- 3rd. The cost of arc lighting at the lamps in the municipalities.
- 4th. The cost of incandescent lighting at customers' premises.
- 5th. The cost of power at motor terminals.

The first two tables refer to eighteen municipalities. The three latter tables, relating to distribution, refer only to the seven at present interested.

The yearly costs per horse-power, shown in Table 24, are obtained from the annual costs at Niagara, divided by the horse-power available at the outgoing terminals of the Niagara plant. Those in Table 25 are obtained by adding

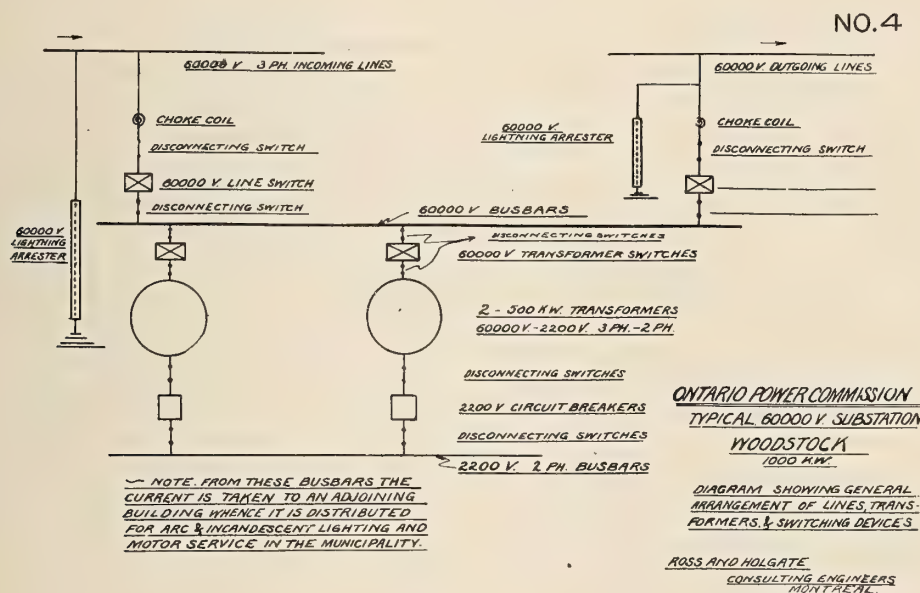
the annual total costs at Niagara, as per Table 24, to those of transmission calculated on the principle stated in a footnote to the table itself.

Tables 26, 27 and 28 are obtained by adding to the annual distributing costs the amount obtained by multiplying the maximum demands of those services by the annual cost of the power and reducing the result to the various unit bases adopted.

It will be noted that in none of the above has any consideration been given to the possibility of over-sale of power. This will occur in practical operation, tending to reduce somewhat the cost thereof; and it appears probable that the Commissioners, in view of overlapping demands, could probably sell 25 to 33 per cent. more power than is actually developed. Further, it should be noted that all electrical machinery herein figured upon has a capacity for at least 25 per cent. over-load, so that under any condition of operation with the equipment estimated upon there is an ample allowance throughout to enable one or more units of equipment to be shut down for repairs.

Rates for Power and Light.

From the preceding tables it will be seen that the costs of power vary with the amounts of power required in the different municipalities, as well as with their distance from the source of supply; and in certain instances it will be noted that the limit of economical distribution has been about reached for the special conditions which exist in this district. It may be confidently anticipated that within the next few years many of the branch lines, and probably some of the through lines, of railway will be electrified, thus furnishing an additional market for power beyond that herein considered; also that the development and sale of power at reasonable rates will tend to build up this section as a manufacturing district, to the consequent benefit of the power undertaking. We have, however, dealt only with the actual facts relating to the conditions which exist, and have made no attempt to discount the future; but it may be predicted with confidence that, under the actual existing conditions, the cost of power will not be in excess of the prices given, and in the future they will be reduced as the above prospects are realized.



Total Annual Costs of Power if Site No. 3 at Niagara Falls be Developed instead of Site No. 4.

Pursuant to the "Special Note," submitted on a previous page, we beg to say that, while hitherto Site No. 4 only has been considered, and the costs shown in previous tables refer only to the development of that site, it is now deemed advisable to insert in this report an additional set of tables showing the yearly costs of operation should Site No. 3 be developed instead of Site No. 4. This provides for any contingencies that may arise which would render it inadvisable to develop Site No. 4.

By referring to Table No. 8 it will be seen that the development of any other site than No. 4 involves a considerable increase in capital costs at Niagara, and in consequence an increase in the fixed charges, thus increasing the yearly cost of operation; but no changes in actual operating costs are required. In the tables to follow account has been taken of the additional interest, sinking fund and maintenance charges, and the whole amount thereof is carried forward to the costs at customers' premises. This is shown clearly in Tables Nos. 29, 30, 31, 32 and 33 following, and the notes on Tables 24, 25, 26, 27 and 28 apply equally to these.

In dealing with the question of rates, consideration ought to be given to actual commercial conditions and not exclusively to the actual estimated costs set forth in these tables, which should merely be considered as a basis from which rates are to be struck, and not the rates themselves. Rates for arc lighting are not fixed by what arc lighting actually costs, this being unknown to the company itself in many cases, but vary in each locality, depending upon the number of lights contracted for; the need, urgent or otherwise, of the municipality; the strength of the operating company; and very largely, too, with the costs of lights furnished to other municipalities in the immediate vicinity. Similarly, incandescent rates are not fixed in accordance with what incandescent lighting actually costs, but at a figure at which they will yield greatest returns, avoiding, on the one hand, the discouraging of use by excessive rates, and on the other hand, the installation of excessive plant to take care of unremunerative business obtained at too low rates.

As regards the cost of power for motors, this is usually determined very largely by the condition existing in each particular customer's premises, and generally by what price he can afford to pay, the endeavor being to consider each case on its own merits, and to give such a rate as will entice

the prospective customer to abandon the use of his steam power. It is, therefore, not possible to discuss rates other than those given, which indicates what should be charged to repay all the expenses of development, generation, transmission and distribution.

Whether the development and distribution only are in the hands of the Operating Commission and the local distribution in the hands of each municipality, or whether all alike are in the hands of the Operating Commission, the question of the local rates for lighting and power should be determined by an accurate knowledge of local conditions and present rates. The cost per horse-power at each municipality has, however, been definitely calculated as indicated in the tables.

Cost of Steam Power.

In view of the contemplated transmission of electrical power it becomes pertinent to enquire what are the costs of developing power through prime movers, such as gas and steam engines. Inasmuch as any general statement of the costs of steam power is of little or no value without knowing the local conditions, in order to present figures relating to this matter, it becomes necessary to study the conditions which are prevalent in the district. By our canvass of the manufacturers in the seven municipalities we are enabled through reports received to determine the general character of the steam plants installed; the hours of work; the rates of wages for engine-room staffs; the cost of coal, etc., and are, therefore, able to present with this report an estimate of yearly cost per horse-power, based upon conditions which are general throughout the district in question.

It is not to be anticipated that the costs given will fit any particular case, but if it were possible to average all the results of steam power costs for each size of plant throughout the district we would expect the costs to be about the same as averaged while differing widely from the extreme cases met with, which extremes are due to abnormal conditions of load and service.

The tendency of the steam user is always to minimize the costs of his power. This arises from his practice of leaving out factors which are important. It will generally be found that his estimate is based upon the addition of wages, coal, and sometimes oil and supplies, and the division of the yearly costs so found by the rated horse-power of his plant, while in addition, interest, depreciation and repairs are also chargeable to the cost, and that not only upon the plant itself, but upon the buildings and land upon which it is built.

Further, it is frequently found that while any particular plant under consideration may be of 100 h.p. capacity, its average load is much less; say, 50 h.p. for illustration. This fact alone, apart from any other, immediately doubles the yearly cost as compared with an estimate made, based upon the rated horse-power of the engines. It is, therefore, necessary to consider not only the cost of power developed from steam at the rated horse-power of the engines, but also at the indicated horse-power of load found to exist in the average plant used for industrial purposes apart from those large users, such as electric light, street railway and pumping stations.

A separation has, therefore, been made of Class B in Table 2, which deals chiefly with steam plants used for industrial purposes, and it has been found for this class of service, which represents the average manufacturer throughout the district more accurately than any other, that while the rated indicated horse-power of engines installed is 24,779, the actual present loads are 19,122, indicating that

on the average these industrial plants require only 75 per cent. of the power which their engines are capable of developing, based upon their rated horse-power. We have, therefore, assumed in the tables of steam cost these average conditions, but to meet that case where the engines are fully loaded, we have assumed, as an addition to this load factor, one of 100 per cent., wherein the actual indicated horse-power and the rated indicated horse-power are the same.

Basal Conditions.

It has been found in this district the following general conditions exist, and upon these conditions tables are based:—

- Average working days per year, 305 of 10 hours each.
- Average price of coal on the boiler-room floor, per ton, \$4.
- Average rates of wages for boiler and engine-room staffs, from \$300 to \$1,200 per year.
- Steam pressure, from 60 to 150 pounds.
- Average load factor, 75 per cent.
- Engine speeds, 80 to 300 revolutions per minute.
- Types of engines, simple slide valve up to compound condensing Corliss types.
- Evaporation of water per pound of coal, 7 to 9 lbs.
- Buildings, from galvanized iron to solid brick.
- Smoke stacks, iron or brick.

It will be seen from the above that there is a wide range in conditions, but, generally speaking, it will be found that the cheaper construction and less efficient plant is confined to the small sizes. At one end of the scale will be found small plants having slide valve engines of uneconomical types, with cheap fire-tube boilers, iron smoke stacks, cheap buildings; and at the other extreme the largest plants will be found to have compound condensing engines, with water-tube boilers, high-pressure steam and substantial brick buildings, so that, all these being taken into account and the quality of the buildings and apparatus graduated in proportion to the size of the plant, a fair average results.

Table 34 shows in the first column the horse-power of the plants estimated upon, ranging from 10 indicated horse-power to 750 indicated horse-power in engines. This horse-power relates, so far as engines are concerned, to single units of the above sizes, while, so far as boilers are concerned, the estimate is based upon a boiler capacity sufficient to supply the indicated horse-power of the engines at the rated horse-power of the boilers, which vary from one to three in number, as plants increase in size, the larger plants having water-tube boilers, the smaller plants fire-tube boilers.

In the second column of Table 34 is shown the yearly cost of operation for 305 days of 10 hours each at full rated load, with coal at \$4 per ton on the boiler-room floor. The figures given include the following:—Coal, wages, supplies, depreciation, repairs and interest. Interest has been assumed at 5 per cent., depreciation from 2 per cent. for buildings to 10 per cent. for small boilers and pipes, but graduated throughout according to the size and original excellence of the plant.

In the third column of Table 34 is shown the cost per horse-power year with the engines operating at three-quarters load, this being the average condition found to exist throughout the district, the figures being derived in the same way as those for the rated loads in column two, with the addition of the extra coal required when operating under smaller load. It must be carefully noted that these figures refer, for example, to 75 load horse-power derived from a 100 horse-power plant, while those in column 2 indicate the

cost per horse-power year if 100 horse-power be obtained from the same plant.

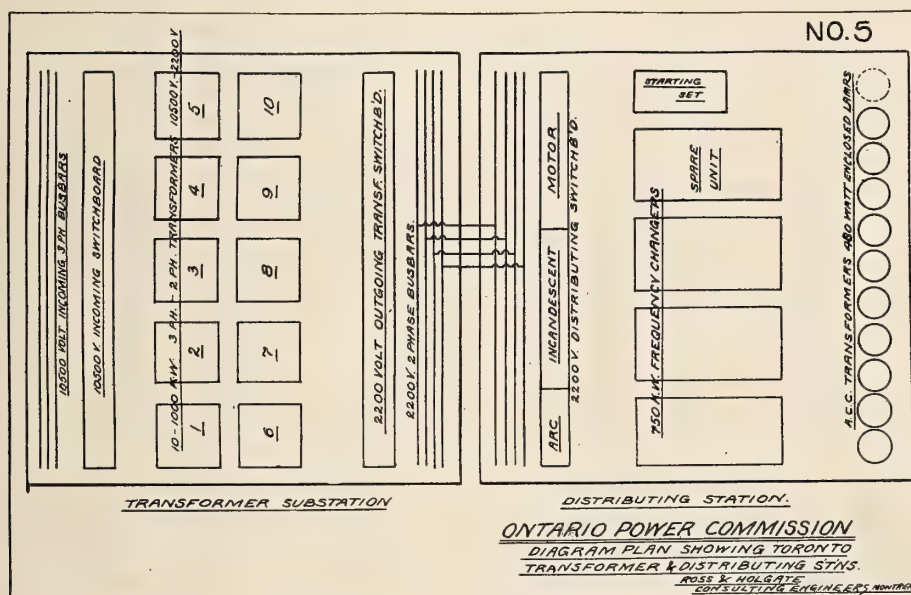
Gas Plant Power Costs.

Although, as shown by the tables, there are few gas engines in existence in this district, it should be borne in mind that the gas engines as a prime mover, when operated from its own gas-producer plant, is becoming a factor in the power problem, one which will have to be faced, and which will tend to limit the economical range of transmitted power, as the cost of operation is decidedly less for most conditions of load than steam power. In this connection we do not refer to the small gas engines at present operated to a certain extent by gas purchased from the gas companies, but to gas engine plants making their own producer gas from their own producer plant. Inasmuch as the gas engine will develop from one pound of coal the power that the best and most economical type of steam engine in this district will not produce for less than two pounds, it is evident that great economies in fuel consumption will result in their adoption. Fuel-saving, however, is not the whole

at partial loads its operation is not attended with the same economies; and in fact, on one-half load or less, generally speaking, the steam engine is the more economical of the two. Further, it should be remarked that while the modern steam engine has an overload capacity of from 25 to 50 per cent., with as nearly as good economy as at full load, the gas engine has practically no overload capacity that can be depended upon, so that where peaks of, say, 25 per cent. overload exist, 100 per cent. of steam equipment will meet this demand, whereas it will require 125 per cent. of gas engine equipment.

In table 35 attached is shown a comparison of the yearly cost per brake horse-power of operating steam and gas engines both at full load and at three quarters load.

Figures relating to size are derived from the preceding table in which the indicated horse-power only was considered, as this lends itself to the direct comparison of the costs of power obtained by electric motor driving. In this table, however, owing to the fact that the indicated horse-power is a very uncertain matter with a gas engine, which



of the story, as the initial cost of gas engine and producer plant for sizes under 100 horse-power is, generally speaking, greater than for steam plants of the usual types installed. This last condition, while true at the present time in a general way, may not hold good for long, and it may be anticipated that in the not distant future a gas engine plant, consisting of producer and auxiliary plant and gas engines, may be purchased for about the same price as a first-class steam plant. The results also of operation of the newer type of gas engines are such as to indicate that the reproach of unreliability from which those of smaller sizes at least have hitherto suffered is about to be removed, and the gas engine operating by producer may well be reckoned with as a factor in determining the cost of power. For this reason the attached tables of estimated yearly costs per brake horse-power are given, although not with the same confidence as in the case of steam costs, as the capital costs of the gas plants, being but newly introduced into this country, are very uncertain, installations of all weights, sizes, reliability and costs being offered to perform the same duties, so that the selection of a gas plant to meet certain conditions of operation is by no means an easy one. It might also be stated that while the gas engine at its full rated load is much more efficient than the steam engine,

is or should be rated at its brake horse-power, the cost per brake horse-power year of steam plants are given in preference to the indicated horse-power of the preceding tables, so that they are directly comparable with the gas plants on brake ratings. It may be explained that the indicated horse-power is measured by the amount of steam given to the engines, while the brake horse-power is what an engine delivers at its pulleys to the belting, the difference being losses involved. The figures for gas plants have been compiled upon the same basis in a general way as those of the steam engines, and include the necessary gas producers, scrubbers, washers and auxiliary plant. The necessary buildings also have been included, and the endeavor has been in every way to make these tables comparative.

The cost of gas plants, as mentioned before, fluctuates widely, but in this case they have been computed upon fair average prices for thoroughly reliable plants and the fixed charges computed therefrom.

It has been assumed in both the steam and gas fixtures that no cost is chargeable for water, as in general this is obtained from rivers or wells, and only involves the cost of pumping.

(Signed) ROSS AND HOLGATE.

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Table 1.						
Horse Power Ratings of Plants Installed.						
Seven Municipalities.						
Municipality.	Boilers.	Engines.	Generators.	Motors.	Gas Engines.	Future Average Load.
Toronto and Suburbs	74,380	55,577	24,228	10,825	219	65,078
London.....	9,865	7,097	2,575	769	34	6,633
Brantford.....	5,379	4,696	830	861	9	4,465
Guelph.....	5,590	3,828	770	258	..	3,860
Stratford.....	3,120	2,877	860	232	..	3,029
Woodstock.....	3,355	2,672	.....	24	18	2,724
Ingersoll.....	1,717	1,845	375	294	..	2,094
Total.....	103,404	78,592	29,638	13,263	280	87,883

The above table shows rated indicated horse power of apparatus at present operating in the seven municipalities, from actual canvass. Average loads are obtained from estimates of owners, or engineers in charge, from indicator and load diagrams in some cases, and from watt meter readings in others. "Future Average Load" indicates the owners anticipation of increases within two years.

Table 2.

Available Power Market Seven Municipalities

Municipality	Class "A"	Class "B"	Class "C"	Class "D"	Class "E"	Total
Toronto and Suburbs	6,547	11,246	21,810	1,158	103	40,864
London	462	1,260	2,520	193	23	4,458
Brantford	440	862	1,455	290	.....	3,047
Guelph	300	877	870	357	.....	2,404
Stratford	229	1,400	210	145	.....	1,984
Woodstock ...	24	668	510	262	9	1,473
Ingersoll	294	367	540	125	.....	1,326
Total	8,296	16,680	27,915	2,530	135	55,556

The above table indicates available power market or the estimated loads available to the Transmission Commission, divided as follows :—

Class A.—Those using electric motors exclusive of street railway motors, rotary converters, etc.

Class B.—Industrial plants using steam for power only, developed from coal and operating generally ten hours per day. This covers a majority of manufacturing plants.

Class C.—Public service plants such as electric light, street railway and pumping stations, operating 24 hours.

Class D.—Special industrial plants using steam for power and other purposes and in some cases burning refuse.

Class E.—Gas and oil engine plants.

Each plant and class is considered by itself as to its probable acceptance of transmitted power. A certain proportion of each class is included in the table; that proportion being calculated according to the probability of a substantial saving being made by the use of transmitted power. To avoid including motor loads in class A under generator loads, these have been deducted from Class C.

Table 3.

Power Market Considered Available in Eighteen Municipalities.

Municipality.	Populat'n.	No. Mfrs.	Net Power Required Delivered.	Remarks.
Toronto and Suburbs	208,040	847	40,200	The figures for these municipalities were obtained from actual canvass.
London.....	37,976	120	4,690	
Brantford.....	16,619	44	3,331	
Guelph.....	11,496	68	2,412	
Stratford.....	9,959	42	2,012	
Woodstock.....	8,833	40	1,340	
Ingersoll.....	4,573	23	1,340	
Hamilton.....	52,634		13,400	The figures for these municipalities were obtained from a comparison with Brantford, Guelph, Stratford, and Woodstock, and from Government reports.
St. Thomas.....	11,485	50	2,680	
Paris.....	3,229	23	1,072	
Dundas.....	3,173	17	670	
Mitchell.....	2,000	9	402	
St. Mary's.....	3,384	17	670	
Berlin.....	7,425	68	3,218	
Waterloo.....	3,537	27	1,274	
Preston.....	2,308	15	670	
Hespeler.....	2,247	6	268	
Galt.....	7,866	31	1,476	
Totals	396,784		81,125	81,125

Table 3 developed from table 2 indicates the available market in not only the seven interested municipalities, but in eleven additional, with a population of 2,000 or over, within easy distance of the lines of the original seven. No canvass was made for the eleven additional municipalities, but requirements indicated are based on the number of manufacturers as compared with those in the original seven.

Table 4.

	"A"	Development "B"	"C"
Municipalities supplied.....	7	7	18
Proportion of the available market covered.....	50%	100%	100%
Horse power delivered ..	27,662	55,325	81,125
Horse power required at generating station terminals at peak of load.....	33,000	66,000	100,000
Nominal rating used to distinguish developments.....	30,000	60,000	100,000

The above table indicates the requirements under three considerations :—

1st—Development "A" considering that only half the available market of seven municipalities was obtained.

2nd—Development "B" that the full available market for seven municipalities was obtained.

3rd—Development "C" that the whole available market of eighteen municipalities was obtained.

Developments "A," "B," and "C" are in tables to follow, designated as 30,000, 60,000 and 100,000 horse power nominal developments.

Table 5.

General Data—Generating Plant

	"A"	Development "B"	"C"
Normal capacity of generating plant.....	30,000	60,000	100,000
Maximum capacity of generating plant...	37,500	75,000	125,000
Number of units of wheels and generators	3	6	10
Number of units of exciters and wheels...	2	3	4
Transformers, No. of units.....	9	18	30
Proportion of switchboards, etc., installed	30%	60%	100%
Voltage of generators	12,000	12,000	12,000
Voltage of outgoing lines.....	60,000	60,000	60,000
Frequency of system.....	25	25	25

The above is a general table giving the physical data of the contemplated developments, number and size of generating units, etc.

Table 6.

Distribution Data—Requirements for Lighting & Motor Service.

MUNICIPALITY	DEVELOPMENT "A" 30,000 HORSE POWER				
	No. of Arc Lamps	No. of Inc. Lamps	H. P. required for all Lighting	H. P. available for sale	Total H. P. required
Toronto	1,600	160,000	9,962	10,138	20,100
London	400	27,500	1,950	395	2,345
Brantford	120	16,000	1,020	646	1,666
Guelph	150	6,000	487	719	1,206
Stratford	91	6,000	428	578	1,006
Woodstock	80	4,500	360	310	670
Ingersoll	40	4,000	265	405	670
MUNICIPALITY	DEVELOPMENTS "B" & "C" 60,000 & 100,000 H. P.				
	No. of Arc Lamps	No. of Inc. Lamps	H. P. required for all lighting	H. P. available for sale	Total H. P. required
Toronto.....	1,600	160,000	9,962	30,238	40,200
London	400	27,500	1,950	2,740	4,690
Brantford	120	16,000	1,020	2,311	3,331
Guelph	150	6,000	487	1,925	2,412
Stratford	91	6,000	428	1,584	2,012
Woodstock	80	4,500	360	980	1,340
Ingersoll	40	4,000	265	1,075	1,340

Note.—For the eleven additional municipalities no division of distribution requirements has been made.

From the canvass made is deducted the power required in seven municipalities for arc and incandescent lighting; the horse power available for sale for motors being the difference between what is required for lighting and the total laid down at the municipalities.

Note that lighting is considered as being a fixed quantity for all developments.

Table 7.

Capital Costs—Niagara Plant.

Items	Development "A" 30,000 H.P.	Development "B" 60,000 H.P.	Development "C" 100,000 H.P.
Hydraulic Development.....	\$1,134,620	\$1,151,620	\$1,173,620
Station and Buildings.....	120,000	160,000	308,000
Water Wheels and Accessories	309,375	618,750	1,031,250
Generators	173,250	346,500	577,500
Transformers	132,000	264,000	440,000
Switchboards	60,000	90,000	165,000
Ducts and Cables.....	20,000	25,000	50,325
Cranes and Auxiliaries	15,000	20,000	27,500
Miscellaneous	40,000	50,000	82,500
	2,004,245	2,725,870	3,855,695
Engineering and Business 10%	200,424	272,587	385,569
Total Cost of Construction.....	2,204,669	2,998,457	4,241,264
Interest, 1½ years, 4½%	162,337	220,785	312,296
Sinking Fund	37,972	51,645	73,052
Total Capital Outlay	\$2,404,978	\$3,270,887	\$4,626,612

Note.—Due allowance for contingencies has been made in each item of capital costs.

The above table indicates the capital costs of the three developments at Niagara, considering that the hydraulic development is made for 100,000 h.p., and the machinery and buildings are installed and constructed as required to suit developments for 30,000 h.p. and 60,000 h.p.

Table 8.

Comparative Cost of Developing Various Sites at Niagara Falls.

Estimate "A"	Site No.	Tunnel Length (feet)	Total Capital Outlay Required*	Increased Cost Over Site No. 4
30,000 Horse Power.....	1	6,220	\$3,880,695	\$1,475,717
	2	5,450	3,683,656	1,278,678
	3	4,300	3,389,451	984,473
	4	400	2,404,978	—
Estimate "B" 60,000 Horse Power	1	6,220	4,741,662	1,470,775
	2	5,450	4,544,622	1,273,735
	3	4,300	4,250,376	979,489
	4	400	3,270,887	—
Estimate "C" 100,000 Horse Power.....	1	6,220	6,089,648	1,463,036
	2	5,450	5,892,608	1,265,996
	3	4,300	5,598,405	971,793
	4	400	4,626,612	—

*These capital costs were obtained similarly to those shown in Table 7.

Table 9.

Capital Costs—Transmission Lines—Development "A"—30,000 Horse Power.

Items.	Niagara-Toronto Line.	Niagara-London Line.	Total Cost of Both Lines.
Right of way.....	\$140,000	\$250,500	\$390,500
Towers	129,600	270,540	400,140
Insulators.....	14,400	15,030	19,430
Copper.....	224,868	145,883	370,751
Lightning Arresters.....	11,000	8,800	19,800
60,000 V. Switches.....	16,000	13,000	29,000
Telephone line	22,240	46,426	68,666
	558,108	750,179	1,308,287
Contingencies, 10%	55,811	75,018	130,829
Engineering and Business, 10%	55,811	75,018	130,829
Total Cost of Construction.....	669,730	900,215	1,569,945
Interest 4½%, one year	31,909	42,891	74,800
Sinking Fund, one year.....	7,464	10,033	17,497
Total Capital Outlay.....	\$709,103	\$953,139	\$1,662,242

The above table indicates the capital cost of transmission lines for 30,000 h. p. to seven municipalities for half market, divided

into two services; one terminating at Toronto and supplying Toronto only; and one to London, covering the requirements of the six other municipalities.

Table 10.

Capital Costs—Transmission Lines—Development "B"—60,000 Horse Power.

Items	Niagara-Toronto Line	Niagara-London Line	Total Cost of both Lines
Right of Way	\$ 216,000	\$ 250,500	\$ 466,500
Towers	259,200	270,540	529,740
Insulators	28,800	30,060	58,860
Copper	449,736	291,766	741,502
Lightning Arresters.....	22,000	15,400	37,400
60,000 V. Switches.....	32,000	25,000	57,000
Telephone Line	22,240	46,426	68,666
	\$1,029,976	\$926,692	\$1,959,668
Contingencies 10%	102,997	92,969	195,966
Engineering and Business 10%.....	102,997	92,969	195,966
Total Cost of Construction.....	\$1,235,970	\$1,115,630	\$2,351,600
Interest 4½% one year.	58,888	53,155	112,043
Sinking Fund one year.	13,775	12,433	26,208

Total Capital Outlay\$1,308,633 \$1,181,218 \$2,489,851

The above table indicates capital costs of transmission lines for 60,000 h.p. for seven municipalities for full market, Toronto line terminating at Toronto for Toronto demands only; London line terminating at London for the uses of the six other municipalities.

Table 11.

Capital Costs—Transmission Lines, Development "C", 100,000 H.P.	Niagara-Toronto Lines.	Niagara-London Lines.	Stratford Sub-System.	Guelph Sub-System.	Total.
Extra Buildings and Apparatus (60,000 and 100,000 h.p.)					
Right of Way.....	216,000	328,500	10,134	54,825	64,959
Towers.....	259,200	403,515	24,000	28,000	596,500
Insulators.....	28,800	44,835	10,800	19,080	766,230
Copper.....	449,736	433,718	9,765	108,150	1,001,369
Lightning Arresters.....	22,000	35,200	1,800	6,300	65,300
60,000 V Switches or 100,000 V Switches.....	32,000	44,000	700	700	77,400
Telephone Line	22,240	50,040	1,505	1,756	75,541
	1,029,976	1,339,808	58,704	218,811	2,647,299
Contingencies, 10%	102,997	133,980	5,870	21,881	264,729
Engineering and Business, 10%	102,997	133,980	5,870	21,881	264,729
TOTAL COST CONSTRUCTION. \$1,235,970	\$1,607,770	\$70,444	\$262,573	\$3,176,757	
Interest, one year 4½%.....	58,888	76,603	3,356	12,510	151,357
Sinking Fund, one year	13,775	17,919	785	2,927	35,406
Total Capital Outlay.....	\$1,308,633	\$1,702,292	\$74,585	\$278,010	\$3,363,520

The above table indicates the capital costs of transmission lines for 100,000 h.p. to eighteen municipalities for full market, and includes sub-systems of distribution from Guelph and Stratford, as indicated on map. The St. Thomas extension is included in the Niagara-London line estimate.

Table 12.

Capital Costs—60,000 V and 10,000 V Substations.

Municipality.	Development "A" 30,000 H.P.	Development "B" 60,000 H.P.	Development "C" 100,000 H.P.
Niagara-Toronto System—			
Toronto.....	747,485	1,112,485	1,112,485
Niagara-London System—			
London.....	40,180	70,007	70,007
Brantford.....	30,302	49,170	49,170
Guelph.....	16,072	28,650	28,650
Stratford.....	16,072	28,650	28,650
Woodstock.....	11,417	18,468	18,468
Ingersoll.....	11,417	18,468	18,468
Hamilton.....			139,760
St. Thomas.....			34,685
Paris.....			18,628
Dundas.....			13,863
Stratford Sub-system—			
Mitchell.....			9,593
St. Mary's.....			11,498
Guelph Sub-system—	Not in	Not in	
Berlin.....	30,000	60,000	35,130
Waterloo.....	Develop-	Develop-	20,392
Preston.....	ment	ment	11,943
Hespeler.....			6,352
Galt.....			23,251
Totals.....	\$872,945	\$1,325,898	\$1,650,993

The above table indicates the capital costs of transmission substations in eighteen municipalities.

Development "A" for seven municipalities only at half market.

Development "B" for seven municipalities only at full market.

Development "C" for eighteen municipalities at full market.

Table 13.

Capital costs of Municipal Distributing Plants Arc Lighting
(2,200 V. Distributing Station, arc lines and lamps)

Municipality	Development "A" 30,000 H. P.	Development "B" 60,000 H. P.	Development "C" 100,000 H. P.
Toronto & Suburbs	\$196,463.00	\$196,463.00	\$196,463.00
London.....	43,112.00	43,112.00	43,112.00
Brantford.....	14,016.00	14,016.00	14,016.00
Guelph.....	16,439.00	16,439.00	16,439.00
Stratford.....	11,274.00	11,274.00	11,274.00
Woodstock.....	11,058.00	11,058.00	11,058.00
Ingersoll.....	6,985.00	6,985.00	6,985.00
Totals.....	\$299,347.00	\$299,347.00	\$299,347.00

The above table indicates capital costs of arc lighting distributing throughout seven municipalities, including share of distributing stations, arc lamps and lines for three developments.

Table 14.

Capital Costs of Municipal Distributing Plants, Incandescent Lighting.

(2,200 V. Distributing Station to Customers' Meters.)

Municipality	Development "A" 30,000 H.P.	Development "B" 60,000 H.P.	Development "C" 100,000 H.P.
Toronto and Suburbs.....	\$669,691	\$669,691	\$669,691
London.....	178,520	178,520	178,520
Brantford.....	84,445	84,445	84,445
Guelph.....	47,959	47,959	47,959
Stratford.....	45,902	45,902	45,902
Woodstock.....	40,950	40,950	40,950
Ingersoll.....	39,265	39,265	39,265
Totals.....	\$1,106,732	\$1,106,732	\$1,106,732

The above table indicates capital costs of distributing plants for seven municipalities for incandescent lighting, including share of distributing station, distributing lines in the municipalities,

customers' transformers, connections and the necessary frequency changers.

Table 15.

Capital Costs of Municipal Distributing Plants Motor Service.
(2,200 V. Distributing Station to Customers' Meters).

Municipality	Development "A" 30,000 H.P.	Development "B" 60,000 H.P.	Development "C" 100,000 H.P.
Toronto & Suburbs.....	\$240,037	\$584,033	\$584,033
London.....	22,859	83,003	83,003
Brantford.....	14,513	52,382	52,382
Guelph.....	17,113	46,950	46,950
Stratford.....	16,173	36,571	36,571
Woodstock.....	12,462	27,745	27,745
Ingersoll.....	15,130	31,212	31,212
Totals.....	\$338,287	\$861,896	\$861,896

The above table indicates the cost of distributing systems in the municipalities for motor service estimated as being delivered from separate lines and including share of Distributing Station service transformers and connections, but not motors.

Table 16.

Capital Costs—Summary.

Items	Development "A" 30,000 H.P.	Development "B" 60,000 H.P.	Development "C" 100,000 H.P.
Niagara Plant.....	\$2,404,978	\$3,270,887	\$4,626,612
Transmission Lines.....	1,662,242	2,489,851	3,363,520
Sub-stations 60 V. & 10,000 V.	872,945	1,325,898	1,650,993
Total.....	\$4,940,165	\$7,086,636	\$9,641,125
Additional Costs of Distributing Stations and Lines.....	1,744,464	2,267,975	2,267,975
Grand Total.....	\$6,684,629	\$9,354,611	\$11,909,100
Estimates in Distributing Plants only made for seven municipalities.			
N.B.—Additional cost to above if development made at site 3, as per Table No. 8.....	984,473	979,489	971,793
Totals.....	\$7,669,102	\$10,334,100	\$12,880,893

The above table indicates a summary of capital costs of the three developments.

Development "A" for seven municipalities for half market to the consumers' premises.

Development "B" for seven municipalities for the full market to the consumers' premises.

Development "C" for eighteen municipalities for the full market to the outgoing terminals of the municipal sub-station, but not including distribution costs for the eleven additional, as no distribution costs have been worked out for these.

N.B.—The data furnished in other tables and in the body of the report in connection with the eleven additional municipalities was voluntarily collected and computed by us. We could not, however, work out the distributing costs in these municipalities without incurring an unjustifiable additional expense and delay.

Table 17.—Part 1.

Site 4—Total—Capital Costs—Apportionment to Municipalities.

Municipalities	Development "A" 30,000 H.P.	Development "B" 60,000 H.P.	Development "C" 100,000 H.P.
Toronto-Niagara System—			
Toronto.....	\$4,323,096	\$6,265,424	\$6,216,137
Toronto-London System—			
London.....	847,119	1,095,356	945,185
Brantford.....	429,152	571,097	509,248
Guelph.....	317,441	425,386	377,821
Stratford.....	329,923	431,018	368,154
Woodstock.....	216,226	278,939	244,589
Ingersoll.....	221,672	287,391	249,754
Totals.....			\$8,910,888

Carried Forward ...		\$8,910,888
Hamilton		1,163,812
St. Thomas		399,438
Paris		123,322
Dundas		66,359
Stratford Sub-System		
Mitchell	N.B. — These items do not include distribution.	97,847
St. Mary's		130,136
Guelph Sub-System		
Berlin		426,393
Waterloo		189,628
Preston		106,243
Hespeler		48,095
Galt		246,939
Totals		\$6,684,629 \$9,354,611 \$11,909,100

Note on Development "C."—"Distribution Costs" for municipalities not in commission have not been estimated. Therefore, the costs given from Hamilton to Galt are subject to extra loading for distribution. Toronto to Ingersoll include distribution.

The above table indicates the apportionment of the capital costs of generation, transmission and distribution in the cases of Developments "A" and "B." Development "C" includes the division of the capital costs of generation, transmission and distribution for seven municipalities, and of generation and distribution only for the remaining 11. The capital costs of the Niagara plant have in each case been divided in proportion to the horse power required to be developed at Niagara for each municipality. Transmission line costs have been divided in proportion to the horse power required at Niagara, and the distance from Niagara for each municipality. Distribution costs have been apportioned each to its own municipality.

Table 17.—Part 2.

Site 3, Capital Costs—Niagara Development, Transmission and Transportation and Distribution Apportioned to Municipalities.

Municipalities	Development "A" 30,000 H. P.	Development "B" 60,000 H. P.	Development "C" 100,000 H. P.
Toronto	\$5,043,677	\$6,982,362	\$6,708,654
London	927,378	1,175,209	1,000,041
Brantford	486,100	627,757	548,172
Guelph	361,238	468,957	407,755
Stratford	365,748	466,661	392,639
Woodstock	239,689	302,283	260,635
Ingersoll	245,272	310,871	265,884
Hamilton			1,315,251
St. Thomas			432,622
Paris		Subject	135,923
Dundas		to	74,019
Mitchell		addition	102,798
St. Mary's		of	138,367
Berlin		Municipal	463,157
Waterloo		Distribution	204,720
Preston		cost	114,193
Hespeler			51,520
Galt			264,543
Totals	\$7,669,102	\$10,334,100	\$12,880,893

N.B.—The foot note appended to Table 17, part 1, also applies to this table, which covers cost of site 3, development.

Table 18.

Capital Costs—Niagara Development, Transmission and Transformation—Apportioned to Municipalities.

Municipalities.	Development "A," 30,000 h.p.	Development "B" 60,000 h.p.	Development "C," 100,000 h.p.
NIAGARA-TORONTO SYSTEM.			
Toronto	\$3,216,907	\$4,815,237	\$4,765,950

Municipalities.	Development "A" 30,000 h.p.	Development "B" 60,000 h.p.	Development "C" 100,000 h.p.
NIAGARA - LONDON SYSTEM.			
London	\$602,628	\$790,721	\$640,550
Brantford	316,178	420,254	358,405
Guelph	235,930	314,038	266,473
Stratford	256,574	337,271	274,407
Woodstock	151,656	199,186	164,836
Ingersoll	160,292	209,929	172,292
Hamilton			1,163,812
St. Thomas			399,438
Paris			123,322
Dundas			66,359
STRATFORD SUB-SYSTEM.			
Mitchell			97,847
St. Mary's			130,136
GUELPH SUB-SYSTEM.			
Berlin			426,393
Waterloo			189,628
Preston			106,243
Hespeler			48,095
Galt			246,939

Totals

The above table indicates capital costs, development, transmission and transformation in the same way as Table 17, part 1, but omitting in every case the distribution costs.

Table 19.

Yearly Operating Costs and Fixed Charges.
Niagara Plant.

	Development "A" 30,000 H.P.	Development "B" 60,000 H.P.	Development "C" 100,000 H.P.
Wages	\$17,004	\$21,684	\$21,684
General Expense and Contingencies	17,366	23,816	29,650
Government Rental for Power	32,500	47,500	67,500
Supplies	3,000	4,000	6,000
Maintenance	48,294	74,623	113,427
Interest	108,224	147,189	208,197
Sinking Fund	25,315	34,430	48,701
Total	\$251,703	\$353,242	\$495,159
Cost per H.P. per annum	\$8.39	\$5.89	\$4.95

The above table shows the yearly operating costs of the Niagara Development for three developments, and includes all fixed charges, operating costs and Government rental for power, the latter on the basis of that already paid by existing companies. Allowance has also been made in general expense item for all contingencies, including compensation for accidentals.

Table 20.

Yearly Operating Costs and Fixed Charges.
Transmission Lines and 60,000 and 10,000 V. Sub-stations.

Items	7 Municipalities Development "A" 30,000 H.P.	7 Municipalities Development "B" 60,000 H.P.	18 Municipalities Development "C" 100,000 H.P.
Wages	\$39,364	\$58,812	\$82,940
General Expense	19,734	27,634	39,300
Supplies	3,500	3,500	6,500
Maintenance	64,049	93,316	121,126
Interest	114,083	171,708	225,651
Sinking Fund	26,684	40,165	52,784
Total	\$267,414	\$395,135	\$528,301

The above table indicates the yearly operating costs and fixed charges for the operation and maintenance of the transmission lines.

Development "A" for 7 Municipalities at half market.

" " "B" " 7 " " full " "

" " "C" " 18 " " " "

Table 21.

Yearly Operating Costs and Fixed Charges—Municipal Distributing Plants—Arc Lighting—Seven Municipalities.

Items	Development "A" 30,000 H. P.	Development "B" 60,000 H. P.	Development "C" 100,000 H. P.
Wages.....	\$17,032	\$17,032	\$17,032
General Expense	9,537	9,537	9,537
Supplies	11,279	11,279	11,279
Maintenance and Renewals	9,845	9,845	9,845
Interest	13,472	13,472	13,472
Sinking Fund.....	3,150	3,150	3,150
Totals	\$64,315	\$64,315	\$64,315

The above table indicates the yearly operating costs and fixed charges for arc distribution within the municipal boundaries of the municipalities.

Note.—As previously explained, arc lighting is being considered as being a fixed quantity for developments "A," "B" and "C".

Table 22.

Yearly Operating Costs and Fixed Charges
Municipal Distributing Plants—Incandescent Lighting—
Seven Municipalities.

Items.	Development "A," 30,000 h.p.	Development "B," 60,000 h.p.	Development "C," 100,000 h.p.
Wages	\$26,989	\$26,989	\$26,989
General Expense...	20,364	20,364	20,364
Supplies.....	48,384	48,384	48,384
Maintenance.....	44,005	44,005	44,005
Interest.....	49,803	49,803	49,803
Sinking Fund.....	11,649	11,649	11,649
Totals.....	\$201,194	\$201,194	\$201,194

The above table indicates the yearly operating costs and fixed charges for the incandescent distribution within the boundaries of the seven municipalities.

Note.—As previously stated, incandescent lighting is considered in all municipalities as being the same under the three developments.

Table 23.

Yearly Operating Costs and Fixed Charges.
Municipal Distributing Plants—Motor Service—Seven
Municipalities.

Items	Development "A" 30,000 H.P.	Development "B" 60,000 H.P.	Development "C" 100,000 H.P.
Wages.....	\$20,389	\$20,389	\$20,389
General Expense	20,364	20,364	20,364
Supplies	4,019	4,019	4,019
Maintenance	11,429	32,034	32,034
Interest.....	15,223	38,786	38,786
Sinking Fund	3,560	9,073	9,073
	\$74,984	\$124,665	\$124,665

NOTE.—On Distributing Systems only seven municipalities have been estimated upon under the 100,000 h.p. development.

The above table indicates the yearly operating costs and fixed charges for the municipal distributing plants for motor service in 7 municipalities. NOTE.—As before stated the amount of power available for sale to motor users is considered to be the market in each municipality, less amount required for arc and incandescent lighting, which are assumed as fixed.

Table 24.

Cost of Power per Horse Power per Annum at Niagara Falls
Switchboard.

Cost for all Municipalities	Development "A" 30,000 H. P.	Development "B" 60,000 H. P.	Development "C" 100,000 H. P.
Toronto to Galt inclusive as per table No. 19 ...	\$8.39	\$5.89	\$4.95

The above table indicates the cost of power per horse power per year at Niagara Falls switchboard for the three developments, derived from the yearly operating costs and fixed charges at Niagara as indicated in Table 19.

Table 25.

Cost of Power per H. P. per Annum delivered at Municipal Sub-station Switchboard.

Municipality	Development "A" 30,000 H. P.	Development "B" 60,000 H. P.	Development "C" 100,000 H. P.
Niagara-Toronto System.			
Toronto	\$17.60	\$13.19	\$12.06
Niagara-London System.			
London	27.26	18.07	14.54
Brantford	20.55	13.73	11.37
Guelph	21.71	14.56	13.00
Stratford	27.62	18.02	15.99
Woodstock	24.37	16.37	12.85
Ingersoll	25.60	17.04	13.42
Hamilton			8.89
St. Thomas			15.09
Paris			12.19
Dundas			11.13
Stratford Sub-System.			
Mitchell			24.62
St. Mary's.....			19.67
Guelph Sub-System.			
Berlin.....			12.68
Waterloo			14.55
Preston			16.00
Hespeler			20.06
Galt			15.85

The above table indicates the cost per horse power per year for power delivered at municipal sub-station switch-board obtained by dividing the yearly operating costs of transmission lines as apportioned, plus the costs for power at Niagara, by the horse power delivered to the Municipality by the Transmission Commission as per Table 3.

Table 26.

Cost of Power at Consumers' Premises.
Arc Lighting—Cost per Lamp per Year.

Municipality	Development "A" 30,000 H.P.	Development "B" 60,000 H.P.	Development "C" 100,000 H.P.
Toronto.....	\$42.02	\$37.61	\$36.48
London.....	54.08	44.89	41.36
Brantford.....	49.73	42.91	40.55
Guelph	47.84	40.69	39.13
Stratford.....	56.83	47.23	45.20
Woodstock.....	56.16	48.16	44.64
Ingersoll.....	72.58	64.02	60.40

The above table indicates the cost per arc lamp per year in 7 municipalities under the three developments on the basis of the necessary power costs, as given in table 25 with the addition of yearly distribution costs, chargeable to each municipality for this service, as given in table 21.

Table 27.

Cost of Power at Consumers Premises.
Incandescent Lighting—Cost per K. W. H.

Municipality	Development "A" 30,000 H.P.	Development "B" 60,000 H.P.	Development "C" 100,000 H.P.
Toronto.....	\$.0741	\$.0640	\$.0614
London.....	.115	.0925	.0839
Brantford.....	.0945	.0778	.0720
Guelph .....	.114	.0965	.0926
Stratford.....	.1218	.0983	.0934
Woodstock.....	.1307	.1091	.0995
Ingersoll.....	.1321	.1112	.1023

The above table indicates the cost in each municipality at the consumers' premises for incandescent lighting for the three developments, on the basis of the necessary power for this service costing as per table 25 with the addition of the yearly costs for distribution indicated in Table 22.

Table 28.

Cost of Power at Consumers' Premises.
Motor Service—Cost per h.p. per year.

Municipalities.	Development "A," 30,000 h.p.	Development "B," 60,000 h.p.	Development "C," 100,000 h.p.
Toronto.....	\$21 97	\$15 73	\$14 60
London.....	53 07	23 87	20 34
Brantford.....	30 02	17 93	15 57
Guelph.....	27 68	18 26	16 70
Stratford.....	33 67	21 45	19 42
Woodstock.....	34 48	21 05	17 53
Ingersoll.....	33 96	21 61	17 99

The above table indicates the cost per horse-power per year of power for motors delivered at the consumers' premises, and is obtained by considering the costs shown in Table 25, together with the additional costs of distribution for this service, as shown in Table 23.

Table 29.

Comparative Cost of Power—Sites 3 and 4 at Niagara
Developed—Cost of Power per Horse-power
per Year at Niagara Falls Switchboard.

All Municipalities, Toronto to Galt inclusive	Development "A," 30,000 h.p.		Development "B," 60,000 h.p.		Development "C," 100,000 h.p.	
	Diff. over		Diff. over		Diff. over	
	Site 3	Site 4	Site 3	Site 4	Site 3	Site 4
	\$10.63	\$2.24	\$7.00	\$1.11	\$5.62	.67

The above table indicates the cost of power per horse-power per year at Niagara Falls switchboard for the three developments "A", "B" and "C", derived by dividing the yearly operating costs and fixed charges at Niagara (worked out similarly to Table 19 from Table 8 for site 3), by dividing the horse-power developed at the Niagara outgoing terminals as per Table 4.

Table 30.

Cost of Power per Horse Power at Low Tension side of the
various Municipal Sub-Station Switchboards.

Municipality	Development "A," 30,000 H. P.		Development "B," 60,000 H. P.		Development "C," 100,000 H. P.	
	Diff. over		Diff. over		Diff. over	
	Site 3	Site 4	Site 3	Site 4	Site 3	Site 4
Toronto	\$20.24	\$2.64	\$14.50	\$1.31	\$12.86	.80
London	29.79	2.53	19.33	1.26	15.29	.75
Brantford	23.07	2.52	14.99	1.26	12.13	.76
Guelph	24.39	2.68	15.88	1.32	13.80	.80
Stratford.....	30.25	2.63	19.32	1.30	16.77	.78
Woodstock.....	26.95	2.58	17.66	1.29	13.63	.78
Ingersoll.....	28.20	2.60	18.33	1 29	14.20	.78
Hamilton					9.61	.72
St. Thomas ...					15.89	.80
Paris					12.95	.76
Dundas					11.86	.73
Mitchell					25.41	.79
St. Mary's					20.47	.80
Berlin					13.42	.74
Waterloo.....					15.31	.76
Preston					16.77	.77
Hespeler.....					20.88	.82
Galt					16.62	.77

The above table indicates the cost per horse power per year for power delivered at Municipal sub-station switchboard made up on the principle set forth in the Note to accompanying table No. 25.

Table 31.

Comparative Cost of Power—Sites 3 and 4 at Niagara Developed—
Cost of Power at Consumers' Premises—Arc
Lighting—Cost per Lamp per Year.

Municipality	Development "A" 30,000 H.P.		Development "B" 60,000 H.P.		Development "C" 100,000 H.P.	
	Diff. over		Diff. over		Diff. over	
	Site 3	Site 4	Site 3	Site 4	Site 3	Site 4
Toronto	\$44.66	\$2.64	\$38 92	\$1.31	\$37.28	.80
London.....	56.61	2.53	46.15	1.26	42.11	.75
Brantford.....	52.25	2.52	44.17	1.26	41.31	.76
Guelph.....	50.52	2.68	42.01	1.32	39.93	.80
Stratford.....	59.46	2.63	48.53	1.30	45 98	.78
Woodstock.....	58.74	2.58	49.45	1.29	45.42	.78
Ingersoll.....	75.18	2.60	65.31	1.29	61.18	.78

The above table indicates the yearly cost per arc lamp per year in 7 municipalities under the three developments, on the basis explained in note covering table No. 26.

Table 32.

Comparative Cost of Power—Site 3 and 4 at Niagara developed.
Cost of Power at Consumers' Premises. Incandescent
Lighting—Cost per Kilowatt hour.

Municipality	Development "A" 30,000 H. P.		Development "B" 60,000 H. P.		Development "C" 100,000 H. P.	
	Diff. over		Diff. over		Diff. over	
	Site 3	Site 4	Site 3	Site 4	Site 3	Site 4
Toronto .....	.0801	.0060	.0670	.0030	.0633	.0019
London .....	.1213	.0063	.0956	.0031	.0857	.0018
Brantford .....	.1007	.0062	.0809	.0031	.0739	.0019
Guelph .....	.1205	.0065	.0997	.0032	.0946	.0020
Stratford.....	.1282	.0064	.1015	.0032	.0953	.0019
Woodstock .....	.1377	.0070	.1126	.0035	.1017	.0022
Ingersoll .....	.1385	.0064	.1143	.0031	.1042	.0019

The above table indicates the cost at the consumers' premises of incandescent lighting for the three developments, being obtained as explained in note to table 27.

Table 33.

Comparative Cost of Power—Sites 3 and 4 at Niagara Developed
—Cost of Power at Consumers' Premises—Motor
Service—Cost per Horse-power per Year.

Municipality	Development "A," 30,000 h.p.		Development "B," 60,000 h.p.		Development "C," 100,000 h.p.	
	Diff. over		Diff. over		Diff. over	
	Site 3	Site 4	Site 3	Site 4	Site 3	Site 4
Toronto	\$24.61	\$2.64	\$17.04	\$1.31	\$15.40	.80
London	55.60	2.53	25.13	1.26	21.09	.75
Brantford.....	32.54	2.52	19.19	1.26	16.33	.76
Guelph	30.36	2.68	19.58	1.32	17.50	.80
Stratford.....	36.30	2.63	22.75	1.30	20.20	.78
Woodstock.....	37.06	2.58	22.34	1.29	18.31	.78
Ingersoll.....	36.56	2.60	22.90	1.29	18.77	.78

The above table indicates the cost per horse-power per year of power for motors delivered at the consumers' premises, and is obtained as explained in note covering Table No. 28.

Table 34.

Yearly Cost of Steam Power per indicated Horse Power

					Full Load	75% Load
Indicated horse power of Plant,	10 h.p.				\$86.05	\$111.50
" " " "	25 h.p.				65.41	78.00
" " " "	50 h.p.				47.42	57.50
" " " "	75 h.p.				43.29	53.50
" " " "	100 h.p.				39.05	48.00
" " " "	150 h.p.				33.34	40.60
" " " "	250 h.p.				26.87	32.00
" " " "	500 h.p.				22.61	27.80
" " " "	750 h.p.				20.32	24.00

The above table indicates the yearly cost per indicated horse power of steam power generated at present within the municipalities on the basis.

- 1st. That the plant is loaded to its rated capacity;
2nd. That only 75% of its rated capacity is normally used.

This table is intended to apply to the average industrial plant throughout the district, using coal only and operating 10 hours per day, and does not apply to 24 hour plants, such as lighting, railway and pumping stations, operating 24 hours per day. The costs include all wages, coal, supplies, repairs and fixed charges.

Table 35.

Yearly Cost of Steam and Gas Power per Brake Horse Power.

Indicated horse power		Full Load		75% Load	
		Steam	Gas	Steam	Gas
of Plant	10 h.p.	\$98.95	\$63.00	\$128.22	\$81.23
" " "	25 h.p.	75.72	45.00	89.70	57.67
" " "	50 h.p.	53.35	32.00	64.70	41.73
" " "	75 h.p.	47.62	28.00	58.85	37.52
" " "	100 h.p.	42.95	27.00	52.80	33.10
" " "	150 h.p.	36.67	24.00	44.66	30.36
" " "	250 h.p.	29.55	22.00	35.20	28.00
" " "	500 h.p.	24.26	17.00	30.58	21.52
" " "	750 h.p.	21.84	16.00	25.80	19.70

The above table indicates the comparison between the costs of developing power from steam by the use of producer gas plants and gas engines on the same basis as Table 29, except that for purposes of comparison brake horse power is used instead of indicated horse power.

CANADA'S PIG IRON OUTPUT.

Complete reports compiled by the American Iron and Steel Association show that the total production of all kinds of pig iron in Canada in 1905 amounted to 468,003 gross tons, against 270,942 tons in 1904, an increase of 197,061 tons, or over 72 per cent. The production in 1905 was much the largest in the history of the Dominion, and exceeded that of 1902, the year of next largest production, by 148,446 tons, or over 46 per cent.

In the first half of 1905 the pig iron production of Canada amounted to 20,206 tons and in the second half to 257,797 tons, an increase of 4,759 tons. Of the total production in 1905 432,870 tons were made with coke, 4,836 tons with charcoal and coke mixed, and 30,297 tons with charcoal.

The production of basic pig iron in Canada in 1905 amounted to 172,102 tons, against 70,133 tons in 1904, and the production of Bessemer pig iron to 149,203 tons, against 26,016 tons in 1904. Basic pig iron was made in 1905 by three companies owning six furnaces. The basic pig iron was all made with coke for fuel, but the Bessemer pig iron was made with coke alone, charcoal alone, and charcoal and coke mixed. Canada has not made spiegeleisen or ferro-manganese since 1899, when small quantities of both metals were produced at Bridgeville, Nova Scotia, by a furnace which has since been abandoned.

The production of malleable Bessemer pig iron in Canada in 1905 amounted to 3,300 tons; foundry pig iron, 139,528 tons; forge pig iron, 3,500 tons; and white and molted and miscellaneous grades of iron, including castings made direct from the furnace, 370 tons. Neither ferro-silicon nor ferro-phosphorus was made. The quantity of limestone consumed for fluxing purposes by blast furnaces in Canada in 1905 amounted to 290,310 tons.

The following table gives the total production of all kinds of pig iron (including spiegeleisen and ferro-manganese) in Canada from 1894 to 1905. Prior to 1894 the pig iron production of Canada was not ascertained by the Association.

1894	44,791	1900	86,090
1895	37,829	1901	244,976
1896	60,030	1902	319,557
1897	53,796	1903	265,418
1898	68,755	1904	270,942
1899	94,077	1905	468,003

On December 31, 1905, Canada had fourteen completed blast furnaces, of which nine were in blast and five idle. Of the total, ten usually use coke for fuel and four use charcoal. In addition, one furnace, to use coke, was being built and three coke furnaces were partly erected on December 31st. Work on the partly erected furnaces was, however, suspended some time ago.

During the first half of 1905 Canada had thirteen of its completed furnaces in blast, and during the last half it had twelve furnaces in blast. In the first half of 1904 it had ten furnaces in blast, and during the last half of the year ten furnaces were also running.

ENERGETIC AGENTS NECESSARY.

Great trouble has generally been found by manufacturing firms in getting suitable agents to represent them in the Far East. The correspondent of London "Commercial Intelligence" makes some suggestions which should be of value to Canadian exporters.

"The first difficulty a manufacturer meets with," he says, "is that of finding a good agent. I am inclined to believe that this difficulty is greater in the East than in any other part of the world. In every district old-established and wealthy firms can be found, most of whom may safely be placed in the category of have-beens. Such firms have a greater idea of their own importance than their business ability warrants, and they demand terms in taking up an agency which are simply absurd.

"In nine cases out of ten it is unwise to appoint as agents in the East old-established, wealthy firms, with a multitude of interests. They have neither the time nor the energy to give to any one department. They think their dignity suffers if they attempt to hustle for business. Should it be necessary to appoint such a firm as agents, the only way in which to make the agency a success is to make such terms as will entail the employment by the agents of a man from the manufacturers works, should the volume of business warrant it. Failing such an arrangement, it is better to give the agency to some local man whose interests are small, but who has energy and good business ability. In such a case it may be necessary for the manufacturer to assist such a man with an allowance for expenses or stock. Where there is sufficient business to repay the expense, it is far better to have a man belonging to the firm to look after its interests first-hand. Another way is for a number of firms to combine, and to establish their own offices and show-rooms in the principal cities in the selected district."

PROCESS FOR HARDENING IRON.

A new process for hardening iron has been developed by two Prussian inventors, who advocate adding to the iron a small percentage of phosphorus combined with a large amount of carbon. The iron is heated in a tempering powder of bone dust to which are added 300 grains of yellow prussiate, 250 grains of cyanide of potassium and 400 grains of phosphorus. The receptacle in which the iron and the ingredients are placed is closed and luted with clay and raised to a clear red or white heat. The material treated is then taken out and plunged while still hot into a warm bath.

It is asserted that the process will harden the surface of a piece of iron weighing 400 pounds to a depth of about .04 inches, and that the iron can neither be cut nor chipped by the best steel used, although it can be readily welded.—American Manufacturer.

AMONG THE INDUSTRIES

Fire destroyed the lumber and flour mills in Gadshill, Ont., owned by Mr. Ratz. The loss is estimated at \$12,000.

Fire did some damage recently to the Vulcan Iron Works, St. John, N.B. The loss was fully covered by insurance.

The Standard Chemical Co., will leave Fenelon Falls unless they can get better treatment from the municipality in the matter of taxation.

The Canada Foundry Co. has completed the erection of the two spans of the bridge which they are building at Fredericton, N.B.

A factory for the manufacture of solidified lye has been established in Peterborough. Machinery for the different processes, including canning, has been installed.

The City of Ottawa is improving its water-works plant by the introduction of new heavy valves. The department has placed an order for them with the Kerr Engine Co.

The Toronto Rendering Company has been incorporated to carry on the business of tanning and refining of oils. It is possible that an abattoir may be a later development.

A glass factory will be erected at Eburne, B.C., by local capitalists. The company will manufacture all kinds of glass bottles and vessels, and will ultimately make window glass.

Construction is under way on the new I.C.R. round-house at Truro. The Robb Engineering Company, of Amherst, N.S., have the contract for two 200 horse-power boilers.

The Bowmanville Foundry Co., Limited, are erecting a 60-foot brick addition to their plant. It will be three storeys high, and will add materially to the floor space of this growing industry.

C. S. Peaslee, of Prospect, N.Y., is negotiating with the town of Welland for the establishment of a shoe factory there. His proposal is to start with a staff of 100 employees with an annual pay roll of \$60,000.

The Amherst Foundry Co., of Amherst, N.S., are extending their plant. They are installing a two and one-half ton single beam travelling crane, which will be made by the Smart-Turner Machine Co., Limited, of Hamilton.

The Alberta Railway & Irrigation Company, Lethbridge, has ordered two 175 horse-power Robb-Mumford boilers from the Robb Engineering Company. When these are installed, this company will have nine of these boilers in use.

A pulp mill will be erected at Bella Coola, B.C. A large pulp-wood area has been leased from the Provincial Government, and ample water power is available. Saw mills will be built at once, and a pulp and paper mill will follow.

The output of the Nova Scotia Steel and Coal Co.'s smelters for the month of March was the highest they have ever attained. They ran forty-four thousand tons of steel, although their capacity has just been placed at forty thousand.

Iron smelting works for Niagara Peninsula are now under consideration. It is pointed out that the present smelting works in Canada are kept busy on iron for the manufacture of steel rails, and that other consumers have to import their pig-iron. The plant, as now proposed, will have a capacity of four hundred tons of iron per day.

The Frontenac Cereal Company, of Kingston, who have conducted a milling and elevator business, have gone into liquidation. The business will be continued by the liquidator in order that the assets may be realized on as much as possible. The capital stock of the company is \$600,000, practically all paid up.

A. Jennings & Co., of Montreal, wagon and carriage builders, have just completed and equipped with all latest facilities one of the most up-to-date shops of its kind in Montreal or vicinity. They have installed a twenty-five horse-power Alexander Suction gas plant, and purpose making their own light.

The Diamond Glass Company's new factory in Hamilton will be in operation in a few days. The company, to begin with, will employ 100 hands, and will pay \$1,500 a week in wages. The plant is a thoroughly modern one, and will be capable of turning out a big output.

The Eagle Spinning Mill Company, of Hamilton, are building an all-concrete building for their factory. The mill is 103 by 160 feet, two stories high. It is one of the most modern mill buildings in the country. It is expected that the building will be ready for the machinery by July 1st.

The Warren Church Organ Company has been organized in Woodstock, and they will proceed at once with the manufacture of pipe organs. Messrs. Charles S. Warren and James Hay are the active members. A new factory will be erected this summer, but in the meantime the work will be carried on in the James Hay & Company premises.

It is announced from Sault Ste. Marie that contracts have been let for the construction of the Algoma Steel Company's new open-hearth furnaces, and that work will be begun upon them shortly. Their capacity is to be 200 tons per day. With them it will be possible to use more Helen ore in the company's steel products. The company's rail mill has been surpassing itself. Though built for an output of 500 tons per 24-hour day, it has made a record of 802 tons.

A lead corroding plant for Halifax is announced as a settled fact. Henderson & Potts, Limited, of Halifax, and Brandram Bros., of London, England, are promoting the enterprise. It is proposed to form a stock company with a capital of \$2,000,000, and the prospectus is now out. Lead producing ore is found in considerable quantities in Nova Scotia, and a development of this will take place.

The Hardwood Fittings and Door Company, Limited, Dundas, is the new name of the New Century Refrigerator and Manufacturing Company. The change is in keeping with the line of goods manufactured by this company. Although they have just been in business a short time, they have established a reputation for themselves for their office and store fixtures, and hardwood veneered doors.

A proposition is before the citizens of Morrisburg, Ont., for the establishment of a stove factory. Options have been secured on an old foundry building, and adjacent property by J. F. Howard, of Montreal, and if the village will grant certain privileges, he intends to proceed with the manufacture of iron and steel ranges and radiators. A by-law will be submitted to the citizens granting free light, water, and a fixed assessment, and if this carries, it is expected that work will proceed at once, in installing the machinery.

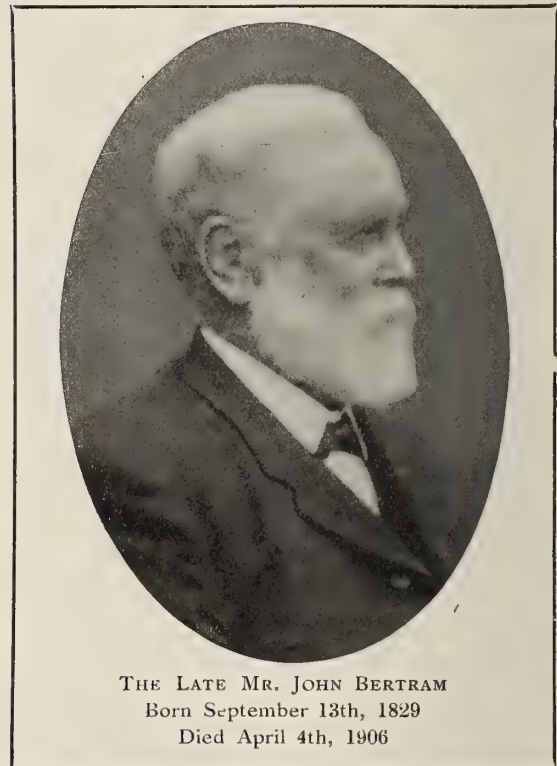
TRADE ENQUIRIES.

NOTE.—For further information regarding any enquiry mentioned under this heading or the names of enquirers, apply by number to the Secretary, at Toronto.

- 328 **AGENCIES, Paraguay.**—A newly established firm of importers in **Asuncion, Paraguay**, are opening up a purely British Commission Agency, and would be glad to receive samples, catalogues and prices f.o.b., Canadian port, or c.i.f., **Asuncion**, from manufacturers of timber, boots and shoes, rye whisky, or other Canadian specialties. Payment 90 days sight. Good references are supplied.
- 329 **West Indies.**—A Manufacturers' agent with a large and valuable trade connection in the West Indies is desirous of representing Canadian manufacturers by sample in the Islands of **Jamaica, Trinidad, and Barbadoes**. Enquiry is especially made for butter, cheese, lard, shirts, cotton piece goods, and boots and shoes.
- 330 **Asbestos, Crude.**—A **Lancashire, England**, manufacturer is desirous of getting into touch with mine owners in Canada who could supply crude asbestos.
- 331 **Ashes, Lead, Tin and Zinc.**—A merchant in **Bristol, England**, who furnishes an excellent reference, is anxious to purchase the above for cash.
- 332 **Baths, Wash-Basins, Closets, etc.**—The English patentee of a device for emptying, cleaning, or flushing the above is anxious to make arrangements for manufacturing under his patent in Canada, and invites correspondence from those who would be prepared to place the product attractively on the market. Photographs and details on application.
- 333 **Birch.**—An east coast of **England** saw-mill company desire to get into communication with Canadian exporters of birch and all classes of hardwood.
- 334 **Boards (Bake), Handles, Dowels and Clothes Pins.**—A well-known firm of exporters in **New York** asks for quotations on carload lots of pastry boards, spruce or basswood, made either in one or two or more pieces glued together and provided with cleats dovetailed on end; also broom handles, foreign style, 50 inches long by 1½-inches thick, parallel all the way, made of spruce or basswood; also fork, rake and hoe handles, and D. shovel handles, made of ash; also maple, beech and birch dowels ¼-inch to 1-inch thick, and from 36 inches to 72 inches long; also common wood or spring clothes pins.
- 335 **Buggies, Boots and Shoes.**—A **London, England**, firm of long standing with large business connections in South Africa, and who are in a position to act as general agents, have an inquiry from **South Africa** for Canadian buggies and Canadian boots and shoes.
- 336 **Canned Goods, Fruits and Meats.**—A **Hull, England**, firm of provision merchants desire to get in touch with Canadian exporters of canned goods, fruit and meats of all descriptions.
- 337 **Canoes.**—A **Liverpool, England**, firm will be pleased to receive catalogue and price list showing trade discounts from Canadian manufacturers of canoes.
- 338 **Cases and Fillers, Egg.**—A **South African** firm of produce merchants desire quotations from a Canadian manufacturer of egg cases and fillers.
- 339 **Dowels.**—Inquiry is made on behalf of a firm in **London, England**, for Canadian manufacturers of dowels. Quotations are asked c.i.f., **London**, from those in a position to ship large quantities.
- 340 **Eggs, Butter, Cheese, Canned Goods, Hog Products, Cereal Foods, and Dried Peas.**—A large **Sheffield, England**, produce firm, making a specialty of Canadian eggs, invite correspondence with Canadian shippers direct, of glycerined eggs, butter, cheese, canned goods, hog products, cereal foods and dried peas; requirements, 200 cheese per week, and from 200 to 300 sides of bacon per week.
- 341 **Flour, Pork, Fish and Canned Goods.**—A general importing house in **Paramaribo, Surinam**, established over twenty-five years, and furnishing first-class references, is desirous of representing some Canadian shippers of provisions. Good prospects are said to exist.
- 342 **Handles, Broom.**—Quotations are asked for large and regular shipments of broom handles to **Hull, England**; required in 51-inch lengths, from 1 1/8-inch to 1 1/16-inch and 1 inch in diameter. Quotations must be through to Hull direct.
- 343 **Handles, Cheap Furniture and Agricultural Hand Tools.**—A large and influential firm in **Birmingham, England**, wishes to purchase any quantity of the following goods: Ash handles, D. handles, stems, hay and manure fork handles, shovel handles, broom handles in basswood, maple, etc., wheelbarrows, washboards, warner wheels, spokes, hubs, hay and manure rakes, cheap furniture, agricultural hand tools, hickory pick, sledge, hammer, axe and hatchet handles. Also shunting poles.
- 344 **Hardwood.**—An East Coast of **England** manufacturing firm desire to get in direct communication with Canadian exporters of hardwood, pine, poplar, walnut and oak specialty, oak blocks—1½-inch to 3 x 22-inch; oak to 23-inch long; ash felloes for cart wheels, perambulator hoops, pine venetian blind laths, ash hand spikes for keels, hickory hand spikes, mail cart shafts, and maple roller blocks.
- 345 **Hoops, Truss.**—A firm of **New York** exporters, giving **Dun and Bradstreet** as references, ask for quotations on 1,000 heavy truss hoops, made of hickory, 18-inch, and 22-inch, double burred and double rivetted, for coopers' use.
- 346 **Implements, Garden.**—A **Manchester, England**, dealer requires catalogues and prices from Canadian manufacturers of garden implements.
- 347 **Leather, Furniture.**—A **Lancashire, England**, firm of furniture manufacturers asks for prices of leather for furniture covering from Canadian manufacturers.
- 348 **Lobsters, Canned.**—A **London, England**, firm desires addresses of Canadian exporters of canned lobsters.
- 349 **Lumber, Shingles, Flour and General Provisions.**—A commission and general merchant in **Montserrat, B. W. I.** established nearly forty years, is about to open up a number of Canadian agencies, and is prepared to handle the above lines.
- 350 **Machinery (Agricultural, Mill and Mine), Coarse Cotton and Woolen Goods, Beer, Harness, Boots and Shoes, Cheap Furniture, Paper, Sewing Machines, Flour, Biscuits, Cured Meats.**—A Canadian, resident in **New York**, would like to hear from manufacturers of the above, with a view to developing an export trade to **Columbia, South America**.
- 351 **Meats and Fruits (Canned), Pea-fed Bacon, Hams, Etc.**—A **Sheffield, England**, firm of produce importers desire to get in touch with Canadian packers of all kinds of canned meats and fruits, especially tomatoes; also pea-fed bacon, hams, etc.

- 352 **Moulding, Picture.**—A Manchester, England, firm of picture dealers at present buying their supplies in Germany desires to obtain prices of picture moulding from Canadian manufacturers of same.
- 353 **Peas, Split.**—An Edinburgh, Scotland, firm with a large connection for the sale of split peas wishes to get into communication with Canadian shippers.
- 354 **Phosphate, Rock.**—A correspondent in Osaka, Japan, desires to get into immediate touch with Canadian producers of the above.
- 355 **Pine, Hardwood, Etc.**—A Hull, England, firm desires to export from Canada direct large quantities of pine, hardwood, and Quebec spruce, and would like to hear from parties interested.
- 356 **Pine (Yellow), Red Wood, etc.**—Enquiry is made for Canadian firms shipping yellow pine, red wood and Quebec spruce, to Hull, England, direct.
- 357 **Pulleys, Wood Split.**—A Lancashire, England, firm at present buying in the United States, will welcome prices of wood split pulleys from Canadian manufacturers.
- 358 **Pulp, Wood.**—(A) A firm manufacturing envelopes in the city of Mexico, desires to form a connection with some firm in Canada that is in a position to export wood pulp to that country.
- 359 (B) A Manchester, England, firm asks for quotations of wood pulp, f.o.b., Montreal from Canadian exporters.
- 360 **Rollers, Blind (Grooved).**—A Birmingham, England, firm wishes to get in touch with a Canadian firm in a position to supply specially grooved rollers for blinds.
- 361 **Salmon, Tinned.**—The Johannesburg, South Africa, branch of a London, England, firm wishes to obtain the agency of a first-class British Columbia packer of tinned salmon.
- 362 **Seats, Motor Car.**—A manufacturer in Altona (Elbe), Germany, sends photographs of a number of bent wood motor car seats of American origin, which he is anxious to purchase in Canada.
- 363 **Seeds (Flower and Vegetable), Corks and Crown Corks, and Advertising Novelties.**—A firm of commission merchants in Bangalore, India, ask for quotations on the above c.i.f., Bangalore or Madras. Payment will be made cash against documents.
- 364 **Smelting Material.**—A Hamburg, Germany, firm doing a general business in smelting material, such as argentiferous and auriferous copper and lead ore, matte, etc., and buying all sorts of ore, such as wolfram, molybdenite, tantalite and columbite, desires to get into touch with Canadian producers.
- 365 **Spokes, Rims and Hubs.**—A large and influential dealer in carriage supplies in Hamburg, Germany, at present buying from the United States, would like to hear from Canadian makers in a position to ship finished hickory spokes in all grades, from 1¼ to 2¼-in., bent hickory rims for carriages and automobiles, also rock elm hubs in the raw and turned.
- 366 **Spruce, Yellow Pine, etc.**—A Crimsby, England, firm of timber merchants invite correspondence with Canadian shippers of spruce, yellow pine, oak, ash, hickory, maple and birch.

- 367 **Standards, White Wood.**—A large Hull, England, firm request communication with Canadian shippers for 1,000 standards white wood, or timber suitable for packing cases. Sizes required, 9 ft. x 10 in. x 10 in. and 9 ft. x 12 in. x 12 in.
- 368 **Staves, Barrel.**—(A) A large Hull, England, firm manufacturing oils, paints and varnishes, desires to get into communication with Canadian mills exporting barrel staves of oak and other woods; regular shipments required of from 4,000 to 6,000 staves. Full descriptions of sizes, etc., will be gladly forwarded on application.
- 369 (B) A Hull, England, firm invite correspondence with Canadian exporters of barrel staves in large quantities; the following are the sizes of the barrels used: 20 x 33 in. long, 11 x 17 in. long, 13 x 22 in. long, 9 x 11½ in. long, 7½ x 9½ in. long.



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- 370 **Wood, Pulp.**—A correspondent in Antwerp, Belgium, asks for the names of Canadian shippers of pulp-wood, cut into lengths of from 4½ to 6 ft.

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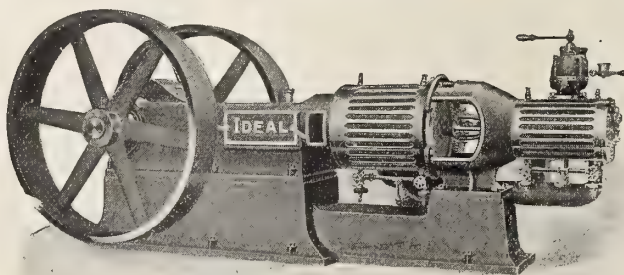
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Canadian National Exhibition

TORONTO, ONT.

August 27th - - - 1906 - - - September 10th

TO MANUFACTURERS :

Each year a great and increasing growth in the interest taken in exhibits of manufactured goods, is the best evidence of the value of such an exposition to the manufacturing industries of Canada. Our buildings devoted solely to the display of manufactured products cover over seven acres of floor space. Even this immense area has been found entirely inadequate to accommodate manufacturers who wish to avail themselves of this splendid means of bringing their manufactured products to the notice of our hundreds of thousands of visitors.

A new and commodious building known as the "Process of Manufacture Building," has been erected this year at an approximate cost of \$100,000, and covers on one floor nearly 90,000 square feet of space.

You will concede the fact that no display is so effective or makes so lasting an impression on the visitor as a practical working demonstration of the actual manufacture of an article. No building in this Exhibition attracts more attention, or interests the general public as much as our Process of Manufacture Building. Indeed, the growing interest in this form of display has made it necessary for the Exhibition to erect a building specially equipped for this purpose. To those exhibitors who have shown actual manufacturing operations in this department in the last three years, arguments as to the value of this kind of exhibit are unnecessary, and the beneficial results have been proven beyond a question.

We invite your careful consideration of the following points :

- (1) Have you in your factory a process that you can show in actual operation?
- (2) If so, don't you think that it would impress itself on our visitors sufficiently to warrant the use of it as a "clincher" to your exhibit?
- (3) We are ready and willing to call and see you personally, and to offer special inducements for this kind of exhibit.

We invite your correspondence.

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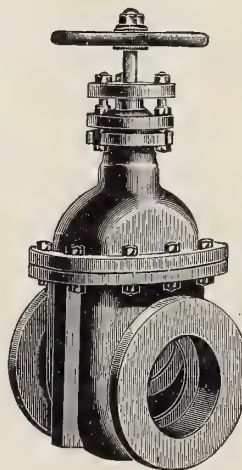
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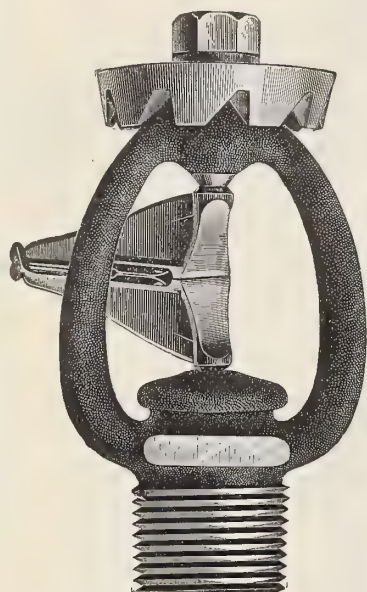
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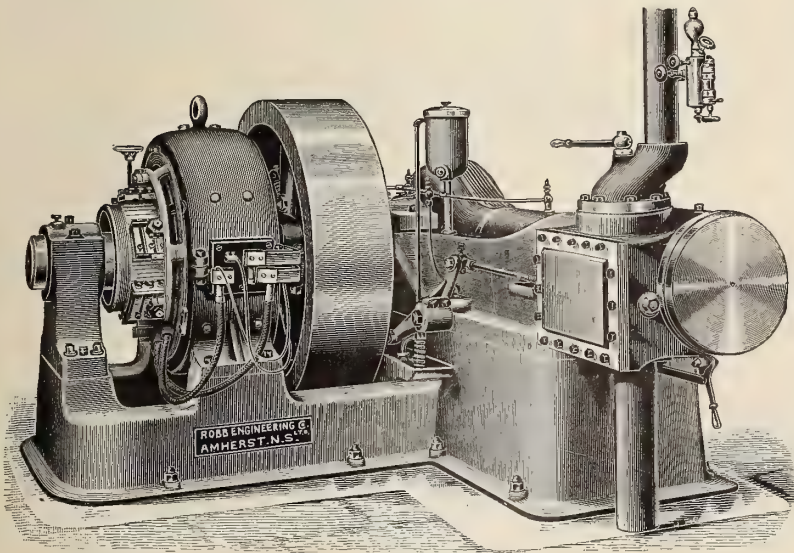


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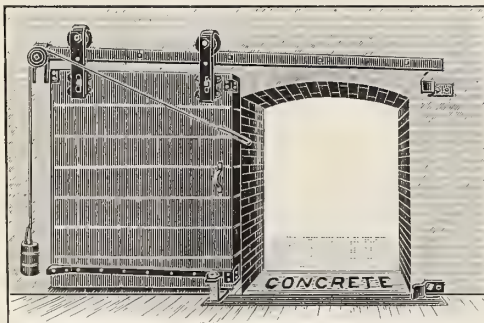
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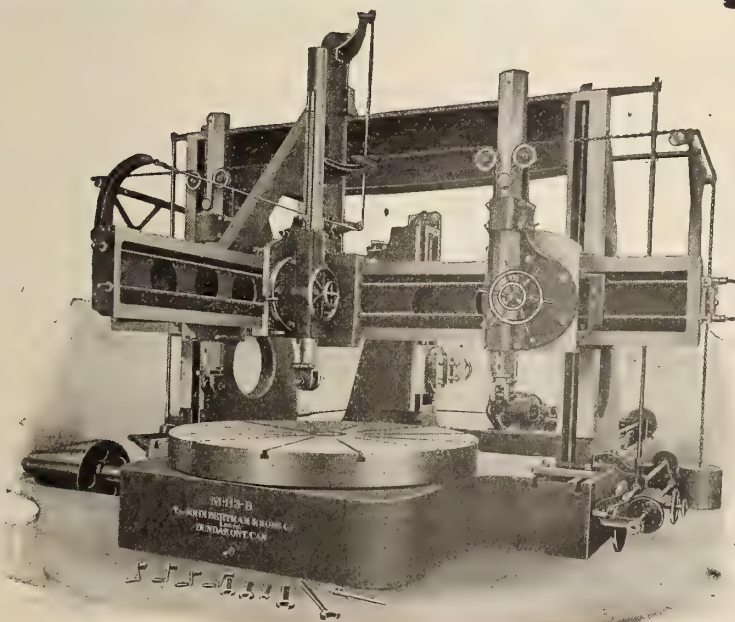
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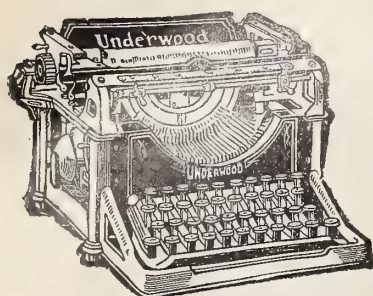
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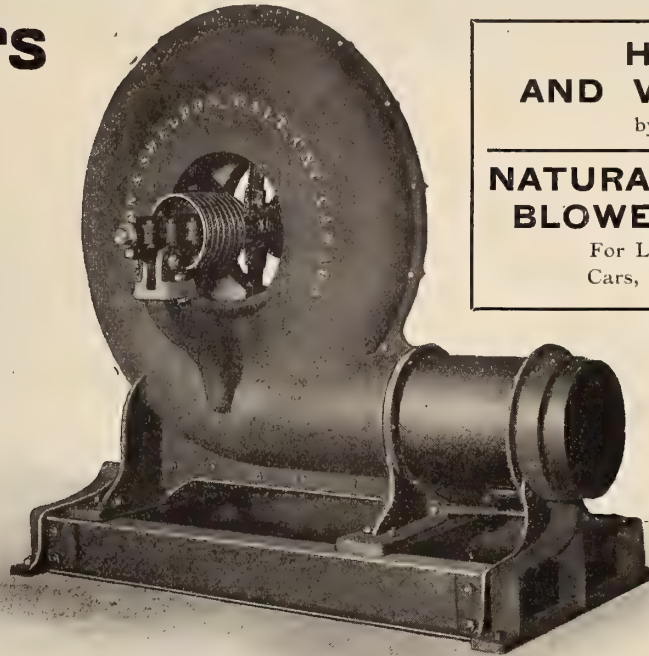
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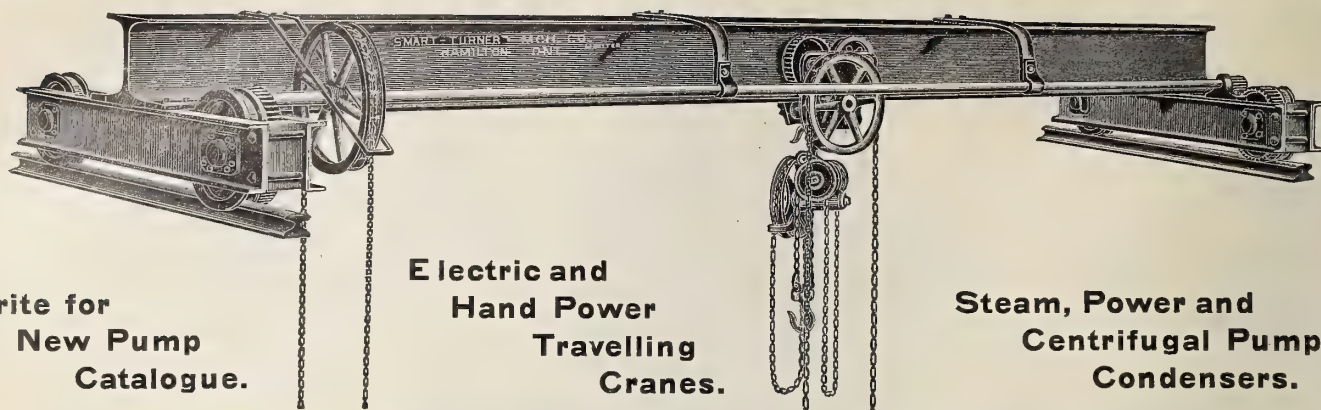
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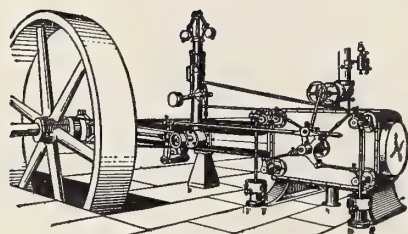
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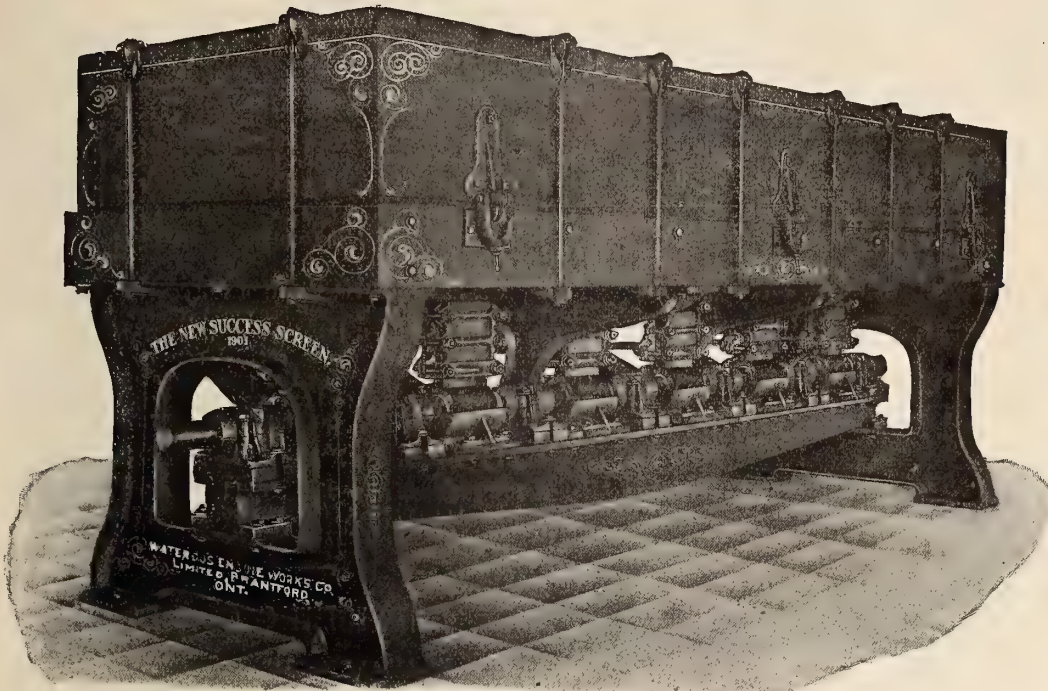
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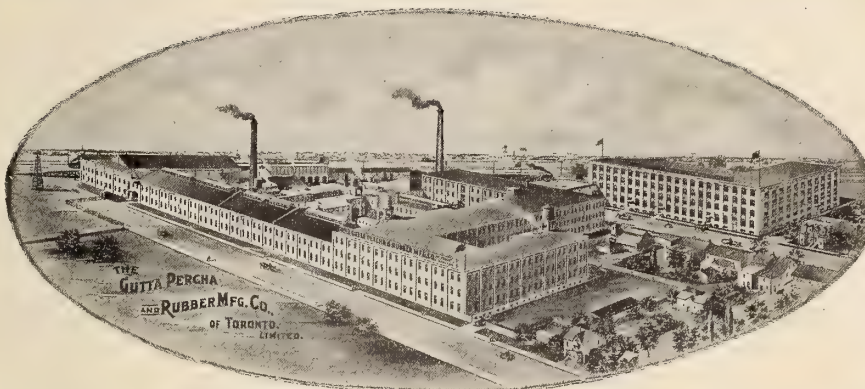
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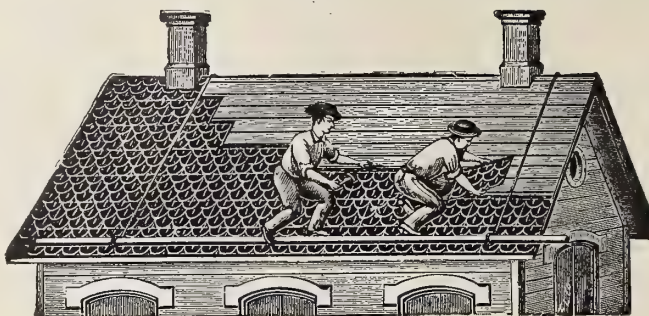
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EXECUTIVE COUNCIL

THE APRIL MEETING.

THE regular monthly meeting of the Executive Council was held on April 19th. The meeting was presided over by the President, Mr. C. C. Ballantyne, Montreal, other members present being:—Messrs. Geo. E. Amyot, Quebec; Geo. Anderson, Toronto; Geo. Booth, Toronto; W. C. Breckenridge, Hamilton; P. H. Burton, Toronto; H. Cockshutt, Brantford; R. J. Copeland, Toronto; John Cowan, Toronto; J. F. Ellis, Toronto; Thos. Findley, Toronto; E. J. Freyseng, Toronto; W. K. George, Toronto; Geo. Gillies, Toronto; Jas. Goldie, Guelph; E. G. Henderson, Windsor; J. J. McGill, Montreal; R. McLaughlin, Oshawa; J. B. MacLean, Toronto; Jas. Maxwell, St. Marys; Robt. Munro, Montreal; J. P. Murray, Toronto; W. C. Phillips, Toronto; J. A. Publow, Hamilton; John Ransford, London; Carl Riordon, Merriton; A. S. Rogers, Toronto; Alex. Saunders, Goderich; J. T. Sheridan, Toronto; J. M. Sinclair, Toronto; T. H. Smallman, London; F. J. Smale, Toronto; A. W. Thomas, Toronto; W. B. Tindall, Toronto; G. A. Vandry, Quebec; F. H. Whitton, Hamilton; D. Wilson, Collingwood.

The minutes of the March meeting were taken as read.

Communications.

Communications were received as follows:—

(a) Regrets at being unable to be present: From Messrs. J. D. Rolland, Montreal; T. H. Estabrooks, St. John, N.B.; J. M. Taylor, Guelph; Wm. Smaill, Montreal; H. L. Hewson, Amherst, N.S.; R. Hobson, Hamilton; D. Lorne McGibbon, Montreal.

(b) Marshall Cushing, Secretary National Association of Manufacturers of U. S. A., urging the Association to take action to counteract the efforts being made to further the adoption of the Metric System. This communication was dealt with in connection with the Commercial Intelligence Report, referred to later.

(c) Mr. Cushing, advising the Association of the dates of the convention of the National Association, and stating that formal invitation would be sent to the Association at a later date. On motion of Mr. Henderson, seconded by Mr. George this invitation was referred to the Reception and Membership Committee with authority to act.

(d) Mr. Elias Rogers, asking the Association to endorse the principle of international arbitration as decided on at the Lake Mohonk conferences. On motion of Mr. A. S. Rogers, seconded by Mr. W. K. George, it was decided to comply with this request.

(e) Messrs. Ed. L. Drewry and C. Bermingham regretting that they were unable to represent the Association at the Congress of Chambers of Commerce. Mr. Jas. Goldie also intimated that he would be unable to be present. On motion of Mr. Cockshutt, seconded by Mr. Murray these regrets were referred to the Commercial Intelligence Committee, and authority given to appoint other representatives if it was deemed advisable, and if any other representatives found it impossible to take part in the Congress to appoint substitutes.

Report of Officers.

Mr. Ballantyne expressed his pleasure in having such a large number of the members of the Council present and particularly the members who had come from a distance.

Mr. Stewart reported on the office work for the past month, and also that in addition to the branch reports that would be presented from Montreal and Toronto, the British Columbia Branch and the Quebec Branch had been doing active work. He also called to the attention of the Council the death of the late Mr. John Bertram, and explained the absence of three chairmen of committees, S. M. Wickett and Thos. Roden, who had recently lost members of their families, and Mr. Dusseau, whose son was very ill at the present time. The death of Mr. John Bertram was referred to by Mr. J. F. Ellis and Mr. Booth. The secretary was asked to extend the deep sympathy of the Association to the family of the late Mr. Bertram and to Messrs. Wickett, Roden and Dusseau.

Mr. Geo. Booth presented a statement of the finances of the Association for the eight months ending April 1st, which was received as satisfactory.

Finance Committee.

The Vice-Chairman of the Finance Committee, Mr. W. B. Tindall, presented this report. The committee are negotiating for a lease of the premises now occupied in the Board of Trade building up to October 1st next, after which date they hope to make arrangements to secure much improved and larger premises in the new Traders' Bank building.

Following the resolution passed by the annual meeting of the Association in Quebec, to the effect that an amendment to the constitution should be brought before the next annual meeting for the purpose of changing the membership fees of the Association, in order to increase the revenue, the Finance Committee suggested that the constitution be amended to put the membership fees on the following basis:—

- (1) Members employing 50 employees and under..... \$10
(Same as at present.)
- (2) Members employing 50 to 100 employees..... \$15
(Increase of \$5 per annum.)
- (3) Members employing over 100 employees..... \$25
(Same as at present.)

This feature of the report was received and was held over for consideration and action at the next meeting of the Council.

Insurance Committee.

The report was presented by the Chairman, Mr. P. H. Burton. The committee reported having made considerable progress along the lines of the resolution passed at the last meeting of the Council endorsing the organization of three Mutual Fire Insurance Companies by the members of the Association. The committee pointed out that the Insurance Department were putting the facts as they found them before the members of the Association, and stated that they hoped to be able to call a meeting of those interested in the formation of the companies at an early date.

The committee also reported having under consideration the question of mutual liability insurance. They believed that it was a subject which the Association might well handle to the advantage of all the members. The committee is investigating the record, experience and plans of different companies and will report fully at a later meeting.

Commercial Intelligence Committee.

In the absence of the Chairman, Mr. Thos. Roden, this report was presented by Mr. R. J. Copeland.

The report dealt with different matters, as follows:—

Catalogues for Foreign Trade.

The Government Commercial Agent in South Africa requested the Association to lend its influence to secure for him a supply of catalogues of Canadian firms. The committee thought well of this suggestion, and were of the opinion that it should not apply only to South Africa, but that all the Government Commercial Agents should be provided with catalogues. The committee decided to arrange, if possible, with the Superintendent of Commercial Agencies, some plan whereby the Association and the Government could work together to keep the different Commercial Agencies supplied with up-to-date catalogues.

Congress of Chambers of Commerce.

A communication was received from a representative of one of the Chambers of Commerce of India, expressing his desire to work with the representatives of this Association on the resolution forwarded, asking for a commission on a uniform system of weights, measures and currency for the Empire. This letter was suitably replied to, and the committee hopes to have this representative from India support their resolution.

The committee is endeavoring to arrange for a meeting of the delegates from the Association with the Commercial Intelligence Committee on April 26th, for the purpose of preparing arguments on the resolutions which have been forwarded.

Denaturalized Alcohol.

A bill now before the Government at Washington, and which has been reported on favorably, providing free denaturalized alcohol for the arts and sciences, in the United States, was brought before the committee by different communications from members of the Association. The committee respectfully recommend this question to the Executive Council as one of the greatest importance to the industries, and would suggest that it be referred to the Tariff Committee for investigation.

New Zealand Exhibition.

As a result of the efforts of the Association forty-five members have already made application for space at the Christchurch Exhibition. The time for making application has been extended to July 1st, and the Government will from now on take active measures to secure exhibits, particularly in lines not already represented.

Metric System.

For the discussion of this subject, Mr. J. P. Murray was invited to meet with the committee. The question is one of great importance to Canada, owing to the attempts that are being made to pass favorable legislation at Washington, and to the vigorous opposition that has been shown by the National Association of Manufacturers. The committee considers that there are two sides to the question, and that, from the information at hand, the Association is not prepared to take a decided stand one way or the other. They, however, beg to recommend to the Council the following resolution:—

"That the Association requests the Government not to take any action to encourage the adoption of the Metric System until such time as action is taken by the British Government."

Railway and Transportation.

The Vice-President, Mr. Harry Cockshutt, read this report, Mr. Hobson, the chairman of the committee being unable to be present. It is published in full in another column.

Industrial Canada Committee.

The INDUSTRIAL CANADA Committee report, was, in the absence of the Chairman, Mr. T. A. Russell, read by the secretary.

The committee stated that they had made arrangements to publish in full in the May issue of INDUSTRIAL CANADA, the report of the Ontario Power Commission. The committee were of the opinion that the great importance of the report, from the manufacturers' point of view, justified such action. The consent of the Commission had been obtained, and five thousand copies would be issued.

The report also outlined plans for increasing the subscription list of INDUSTRIAL CANADA, and presented a favorable financial statement.

Parliamentary Committee.

The Parliamentary Committee report as given below was presented by the Vice-Chairman, Mr. A. S. Rogers.

A communication from Mr. C. Brunning, London, England, asking the Association to identify itself with a Labor Bureau in England, and give its support to a paper to be called "The Industrial Canada Labor Bulletin." The committee decided that it would not be wise for the Association to endorse such a Bureau, but that assistance might be given if a suitable opportunity arose.

The Lord's Day Act.

The effect of this bill now being considered by the Dominion Parliament on the manufacturing interests of the country was brought to the attention of the committee by communications from several different members, and the bill was carefully considered.

The committee made the following requests:—

(1) That the wording of clause 4, section "f" be made quite clear to the effect that such establishments, as it is impossible to close down without interfering with the manufacturing process, and entailing a serious loss, shall be allowed to operate. For example, we might instance blast furnaces, electrical reducing and smelting and other similar works.

(2) That manufacturers shall be permitted to keep up steam for heating purposes or for the purpose of fire protection.

(3) That reasonable repairs, which it would be impossible to effect without stopping machinery or closing down shall be permitted, and

(4) Section "h"—That all export freight shall be allowed to proceed to the port of shipment.

These requests have been forwarded to the Hon. Chas. Fitzpatrick and Dr. Daniel, Chairman of the Special Committee considering the bill, and the assurance has been received that the requests will be presented to the committee.

The committee passed a resolution protesting on behalf of the manufacturers of motor vehicles against the bill introduced by Mr. T. H. Lennox in the Local House, which, if passed, would almost have had the effect of preventing automobiles from running. The original bill introduced by Mr. Lennox has been withdrawn, but another bill has been introduced, which is almost as drastic.

An amendment has been presented to prevent manufacturers and others selling under the Conditional Sales Act from having a condition in the Bill of Sale to the effect that

suit may be entered in a court other than where the maker of the note resides. The committee are working with the manufacturers particularly interested to have this withdrawn.

The amendments to the Ontario Assessment Act, which were introduced on behalf of the Association by Mr. McNaught, have been before committee. It is not expected that there will be any reduction in the business assessment of manufacturers, but the committee are hopeful that a clause will be passed which will go a long way towards putting joint stock companies and partnerships on the same basis for assessment purposes.

This bill, which is in the form of an amendment to the Act respecting Stationary Engineers has passed the committee appointed to deal with the same. The Parliamentary Committee regard the bill in its present shape as most objectionable, as it gives to interested parties a very serious control over the engineers of the Province.

The committee acting on the instructions of the Council did not oppose the principle of the bill, but offered such suggestions as they thought would safeguard the interests of the manufacturers. A few changes of importance were made and the committee is now endeavoring to have the Government withdraw the present bill from the House altogether on the assurance that a Government measure will be introduced at the next session.

The question of insolvency and fraudulent debtors was brought before the committee by communications from Mr. J. S. King, who submitted also constitutions, by-laws, and reports of different protective associations organized in the United States for the purpose of prosecuting to the full extent of the law fraudulent debtors. The question was considered to be of importance, and it was decided that an article on the same should be published in next month's *INDUSTRIAL CANADA*, for the purpose, if possible, of ascertaining what interest was taken in the question by the general membership.

Reception and Membership Committee.

This committee recommended the acceptance of thirty-six applications for membership, which are published in another column. The committee reported progress on the arrangements for the Winnipeg convention and the trip to the Pacific Coast, and stated that they hoped to be able to make an announcement to the members within a few days.

The report of the Montreal Branch was presented by Mr. J. J. McGill, and of the Toronto Branch by Mr. W. B. Tindall. Both of these reports are published in another column.

Mr. E. G. Henderson suggested that the question of rates of postage on parcel post was one that should be considered by the Commercial Intelligence Committee.

Mr. W. B. Tindall asked what steps had been taken to have the Government put express companies under the control of the Railway Commission, and was informed that the resolutions of the Association had been presented to the Government, and personal representations would be made at an early date.

The meeting then adjourned.

RAILWAY AND TRANSPORTATION COMMITTEE.

The regular monthly meeting of the committee was held on April 11th. The following subjects were discussed:—

Transcontinental Rates.

The Manager of Transportation Department reported that the hearing of the Association's complaint regarding

transcontinental rates was concluded at Ottawa on the 23rd of March. Judgment of the Board was reserved.

Classification Changes.

Manager of Transportation Department reported that as a result of representations the railways have agreed to arrange for fourth class rates on Rockingham, Yellowware, etc., in less than carloads in the territory east of Port Arthur, for an extension of the measurements governing the shipment of plate glass in box cars, and for the inclusion of four-inch cast iron pipe in the seventh class rating, carloads. An Order of the Board of Railway Commissioners authorizes a reduction to second class on cream separators, less than carloads, and also gives effect to the arrangement covering Classification rules 2, mixed carloads; and 6, single shipments on flat cars, as agreed to with the Canadian Freight Association.

Mis-Classification and Mis-Description of Freight.

The Advisory Committee of the Canadian Freight Association have brought to the notice of the Transportation Department the alleged persistent mis-description of property by shippers, and have requested the Committee to consider the matter, with a view to seeing if anything can be done to assist in stopping the objectionable practice. The Committee decided to request the railways to give specific information as to the extent and character of the mis-description, on receipt of which it would be dealt with in "*Industrial Canada*."

Metallic Roofing Case.

The decision of the Board of Railway Commissioners with regard to the minimum weight to attach to the commodity rates ordered on metallic shingles, has been received. The Board orders a minimum weight of 24,000 pounds in the territory west of Winnipeg, and 30,000 pounds Winnipeg and east.

Amendment to Railway Act.

A copy of the bill amending the Railway Act, as submitted to Parliament, has been received. The most important feature is that which brings the telephone companies under the jurisdiction of the Board of Railway Commissioners in the matter of tolls, and also requires connection between municipal and trunk lines. The Committee did not consider any action necessary in the premises.

Lumber from British Columbia to Eastern Canadian Points.

Communication was reported from the Secretary of the British Columbia Branch asking assistance in an application to the Board of Railway Commissioners for disallowance of a recent advance of 10 cents per 100 pounds on cedar and pine lumber, and timber commodities, and also upon timbers over 40 feet, requiring two or more cars for carriage. The matter is now under negotiation between the interested shippers and railways, but, in the case of failure to reach an amicable settlement, and an application to the Board of Railway Commissioners being necessary, the Manager of Transportation Department was authorized to take action.

Export Rates.

Communication from the Board of Railway Commissioners received by Manager of Department intimated that the railway companies have applied to the Board for a re-hearing of the Export Rate Case, with a view to securing a modification or the rescinding of orders issued by the Board under which the reduced basis of rates was granted. A communication has been sent to the Board to the effect that the Association is totally unprepared to deal with the matter, having no information as to the proposition, if any, the railways desire to make.

NEW MEMBERS.

Passed by the Executive Council in April, 1906

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Calgary, Alta.

DOMINION MEAT & CATTLE RANCHING CO., LTD.—Meat Packing and Exporting.

Clinton, Ont.

THE CLINTON THRESHER CO., LTD.—Engines and Separators.

Coaticook, Que.

CASCADE NARROW FABRIC CO.—Braids and Tapes.

Guelph, Ont.

THE ELECTRIC BOILER COMPOUND CO., LTD.—Electric Boiler Compound and Oils.

Hamilton, Ont.

THE HAMILTON STEEL & IRON CO., LTD.—(H. H. Champ, 2nd Member).

Hull, Que.

THE E. B. EDDY CO., LTD.—(George H. Millen, 2nd Member).

Ingersoll, Ont.

O. E. ROBINSON & CO.—Dried and Evaporated Apples and Canned Goods.

Kincardine, Ont.

COOMBE & WATSON—Furniture.

Montreal, Que.

THE CANADIAN BRONZE POWDER WORKS.—Bronze Powders.

CANADIAN RUBBER CO., OF MONTREAL, LTD.—(Harrison C. Frost, 7th Member).

CANADIAN RUBBER CO., OF MONTREAL, LTD.—(R. J. Younge, 8th Member).

FASHION-CRAFT MFRS., LTD.—Men's Clothing.

MONTREAL ROLLING MILLS CO.—(J. R. Kinghorn 2nd Member).

SMART BAG CO., LTD.—Jute and Cotton Bags, Buckrams, Paddings, etc.

A. R. WHITTALL.—Cans, and Black Sheet Iron Goods.

Palliser, B. C.

PALLISER LUMBER CO.—Lumber, Lath. Peterboro', Ont.

THE AMERICAN CEREAL CO.—Cereal Products. Quebec, Que.

DUSSAULT & CIE.—Saw Millers, Lumber and Lath.

TURNER LUMBER CO.—Lumber.

Rock Island, Que.

J. B. GOODHUE.—Shirts, Pants and Overalls.

Sherbrooke, Que.

WALTER BLUE & CO.—Clothing.

Sutton, Que.

CLARK BROS.—Butter Tubs.

A. J. GARLAND & SON.—Handles.

Toronto, Ont.

W. E. BLAKE.—Church Vestments, Statuary.

CANADIAN SEAMLESS WIRE CO. LTD.—Gold, Silver and Filled Wires, Tubing, Rolled Plate.

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THE A. J. BURTON SAW CO., LTD.—Inserted-Tooth, Solid-Tooth, and Shingle Saws, Band Saws.

Victoria, B. C.

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Waterloo, Ont.

THE SCHIERHOLTZ ZINKANN CO., LTD.—Parlor Frames and Upholstered Furniture.

Waterville, Que.

THE DOMINION SNATH CO.—Snaths, Rakes, Handles.

Winnipeg, Man.

MASSEY-HARRIS CO. LTD.—(Charles H. Whitaker, 6th Member).

TELFER BROS.—(H. S. Kirkland, 3rd Member).

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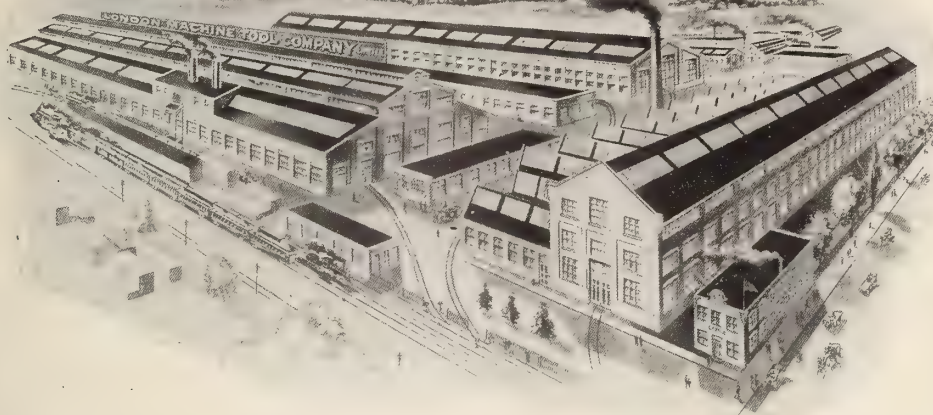
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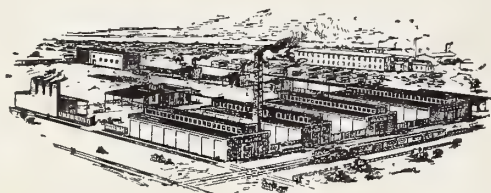
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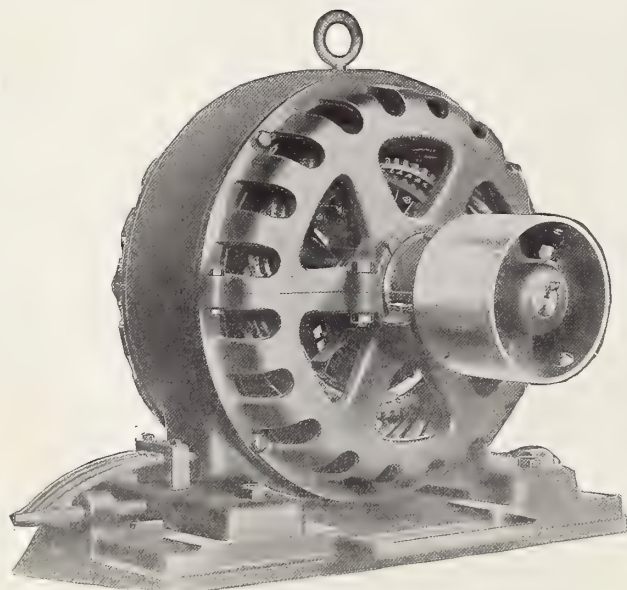
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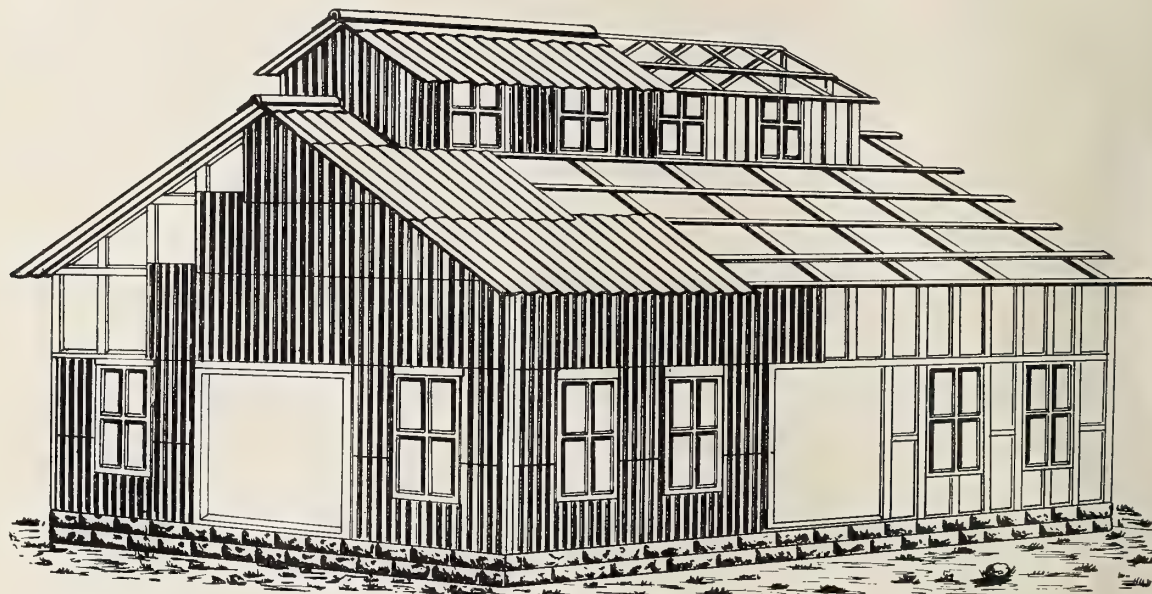
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That they may be assured of the Genuine Article. Our stocks are the largest and most complete in Canada. ASK FOR CATALOGUE.

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TORONTO - - - MONTREAL

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LIMITED

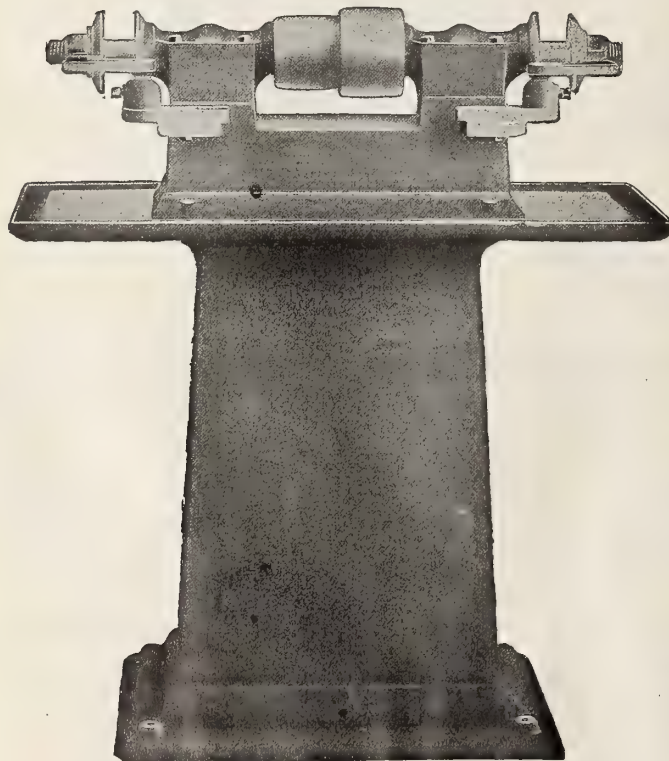
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Will carry two wheels, 12 x 3 inches.

Bearings absolutely Dust Proof.

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Manufactured Goods from Canada

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C. N. & R. SUCCESS

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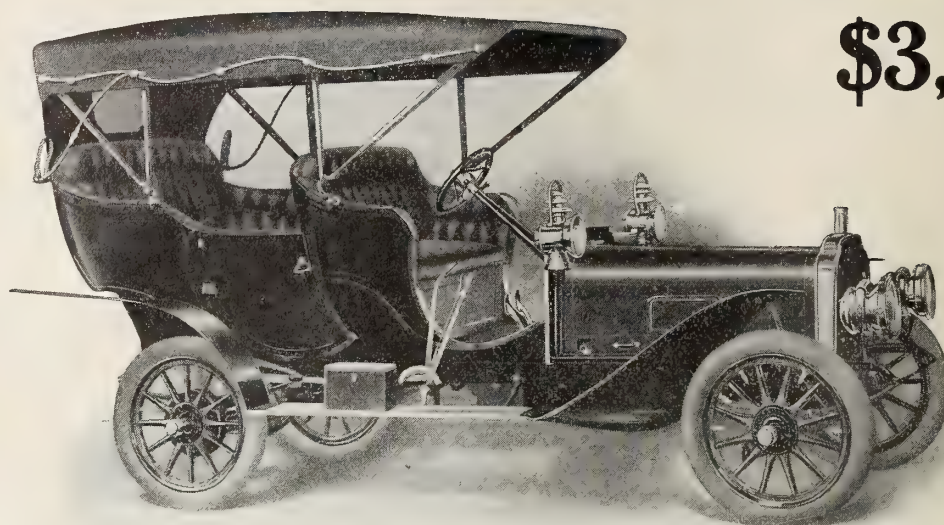


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The Six = Cylinder F O R D

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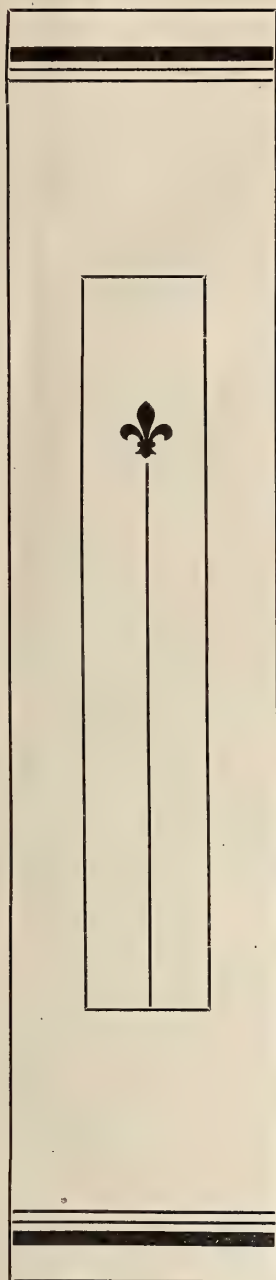
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The great railways of Canada are taking advantage of the opportunities offered by the Regina district.

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after your
interests
there?**

"The Globe is a great paper."—

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If you sell a man this year and he's well satisfied, it's dollars to doughnuts you'll sell him next year if he needs anything in the fur line. Not only this—he'll tell his friends about you—and that means more business.

Now Paquet Furs will bring about this desirable result in your business if you handle them. They are made in the largest Fur Factory in Canada, by experts whose knowledge and skill has



5207

been handed down from father to son for generations. Here in the centre of Canada's Fur Business is a factory which is equipped for the manufacture of Raw Furs into the very newest and most desirable styles in Fur Jackets, Scarfs, Stoles, Muffs, Caps, Gauntlets—in fact everything that is made out of fur.

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Do you wish to see our line? Drop us a card and we will put you on our visiting list.

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Industrial Canada.

ISSUED BY
The Canadian Manufacturers' Association,

Incorporated.

"There be three things which make a nation great and prosperous: A fertile soil, busy workshops, and easy conveyance for man and goods from place to place."—Bacon.

Vol. VI.

TORONTO, JUNE, 1906.

No. 11.

INDUSTRIAL CANADA

Issued monthly as the official publication of the Canadian Manufacturers' Association (Incorporated), and devoted to the advancement of the industrial and commercial prosperity of Canada.

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General Secretary: J. F. M. STEWART.
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Editor: F. P. MEGAN.
Advertising Manager: B. L. ANDERSON.

WINNIPEG, 1906.

ON September 17th, 18th and 19th the members of the Canadian Manufacturers' Association will gather in Winnipeg for their thirty-fifth annual convention. The meeting affords a rare opportunity to the men of the East to see for themselves the progress of the growing West. Winnipeg itself is, from its position, destined to be one of the great cities of Canada. It is growing now at a phenomenal rate. Manufacturers, with the great home market opening up in the Provinces of the middle and far West, should study the conditions existent there, and this can best be done by personal observation.

The convention itself promises to be of special importance to the manufacturers of Canada. The very large membership of the Association ensures representation of every Canadian industry. Questions of vital interest will be discussed. The sessions, extending over three days, will be invaluable to those who attend.

Arrangements for the excursion are nearing completion, and the trip west of Winnipeg will be most enjoyable. Throughout the prairies harvesting operations will be well under way. The important cities will be visited, and time will be given to enjoy the picturesque scenery of the Rockies

at Banff and other points. The mountain trip to the coast will take the members of the party through the most interesting country on the continent. From both a business and a pleasure standpoint the Winnipeg convention of the Canadian Manufacturers' Association should prove a great success.

THE BUDGET SPEECH.

IT was announced some time ago that there would be no tariff revision at the present session of Parliament because the Minister of Finance had sprained his ankle, and, although Mr. Fielding had sufficiently recovered to deliver the budget speech on the 22nd of May, he was obliged to announce that no general revision of the tariff would take place until next November. The manufacturers of Canada have received many promises from time to time that the tariff would be revised in such a way as to afford them better protection, but session after session has passed away without any general revision. A little tinkering, a little patching has been done each session, but no general plan of revision has been brought forward. There is no doubt that the Government fully intended last session to bring down a comprehensive scheme this session, but the Tariff Commission began its investigation very late in the year 1905, and it was scarcely concluded before the session of 1906 began. Then, most unfortunately for himself and the country at large, Hon. Mr. Fielding met with an accident. The Canadian people must pay for the delay in revising the tariff, for between now and next November many millions of dollars, which might have been kept in circulation in Canada, will go out of the country to enrich foreign manufacturers.

The only change made in the tariff is a provision that Canadian railways may take up old rails, send them to the United States to be re-rolled, and bring them back to Canada on payment of a duty of twenty-five per cent. on the value of the labor employed on this work in the United States. From one point of view Mr. Fielding's statement affords ground for gratification. He recognizes the truth of the basic principle of protection that tariff schedules should be based on the value of labor employed in making an article. Nor is this the first occasion on which Mr. Fielding has admitted the truth of protectionist principles. The duty on steel rails, the dumping clause, the increase in the woolen duties, the duty on lead, the oatmeal duty, all give evidence that the Minister of Finance has completely abandoned his old belief in a tariff for revenue only. Not one of these

changes was made for the sake of producing revenue. Nor can it be argued that they were due to the fear of disturbing conditions created by his Conservative predecessors. In none of the cases in point was his action hampered in any way by the policy of his predecessors. He created new conditions, and the purpose he had in view was to give protection to Canadian industry. It must be very gratifying to all concerned in the "Made in Canada" Educational Campaign that Hon. Mr. Fielding has so radically altered his views on the question of protection during the last three years; and this transformation in the mind of Mr. Fielding is but a reflection of the general change of sentiment in the Liberal party in the cities, towns and villages throughout the Dominion of Canada.

But while it is gratifying to know that Mr. Fielding has become a protectionist, the arrangement made regarding the re-rolling of rails in the United States shows that he has taken a very narrow view of the way in which the principle of protecting labor should be applied. Old rails stand in exactly the same relation to steel billets for the manufacture of new rails as scrap iron stands in relation to pig iron for the manufacture of castings, and it would be just as fair and as reasonable for the Government to agree to broken machinery or worn-out stoves being shipped out of the country for recasting as it is to send out old rails for re-rolling. In the one case a billet or an old rail is put through the rolling mill, and the result is practically a new rail in either case. In the other, scrap iron or pig iron is melted, and a stove or other casting produced. Thus old material made in Germany or the United States comes into direct competition with the steel produced in Canadian works by Canadian labor. The decision injuriously affects not only the workmen who roll new rails, but also the men employed in making steel ingots and steel billets, those occupied in making the pig iron which is converted into steel ingots, and even the miners of iron ore, coal and limestone, out of which the pig iron is made. The value of labor in an article should be taken in its entirety, and the value of labor in a steel rail is not covered by the cost of rolling, but includes the labor on all the material there is in it. Under this new Act only the labor employed in the process of re-rolling is taken into consideration.

Allowing re-rolled rails to be returned to Canada at practically a nominal duty in comparison with the tariff on new rails, is also likely to lead to fraud, as, however good the intentions of the railway managers may be, there will always be someone who will take advantage of the situation, and, unless the Customs authorities keep very close watch, including constant supervision of the work being done at re-rolling plants in the United States, it will be impossible to be certain that only the material in the old rails comes back. In any honest re-rolling there would be a certain amount of waste, but the re-rolling mill could make up for that by rolling some rails out of other stock than that received from Canada. Who is to determine what the percentage of waste will be? In some cases it will be far greater than in others. Then rails either too light or too poor in quality for re-rolling may be shipped from Canada and the re-rolling company may return an equal quantity of re-rolled rails made from stock that never saw Canada. They could easily do this under arrangements crediting the railway company with the scrap value of the material sent them, using the old rails either for rolling down into light rails or for other purposes. Such a proceeding would naturally be practically the same as selling new rails, but the duty would be avoided through an exchange of scrap. It is to be borne in mind that it will simply be impossible to identify the rails that are shipped into

Canada as re-rolled with the original rails that are shipped out. The experience of all countries proves that a Customs arrangement that depends upon everyone being strictly honest and truthful is altogether impractical.

Then it should be noted that this re-rolling arrangement is likely to largely interfere with the steel rail industry in so far as the smaller new steam roads and the electric railways are concerned, as a large steam road might ship out for re-rolling quantities of rails, have them returned, and then sell them to electric roads and the smaller steam roads in competition with the steel rail manufacturers.

The new arrangement is a direct breach of faith with the capitalists who invested money in the construction of steel rail mills in Canada with the distinct understanding that as soon as the mills were in operation a duty of seven dollars per ton would be imposed on all steel rails imported. It is altogether unlikely that the necessary capital could have been secured for these industries if Mr. Fielding had explained beforehand that old rails could be sent out of Canada to be re-rolled and escape the payment of the regular duty when returned.

It may be said in excuse that Mr. Fielding announces that as soon as a plant for re-rolling rails has been established in Canada the privilege of sending rails to the United States for re-rolling will be withdrawn. But if the duty were maintained in full the necessary plant would be erected as soon as the railways were able to guarantee that a sufficient quantity would be re-rolled annually to justify the capital expenditure. If the quantity which the railways are ready to guarantee is so small that it would not pay to establish a plant for the sake of it, then it can be no great sacrifice for the railway companies to forego the re-rolling of these rails, and there is no good reason for opening the door to all kinds of fraud in the administration of the Customs law. If the quantity to be re-rolled is sufficient to justify the instalment of a plant, it will be no great loss to the railway companies to pile up the old rails and keep them until such a plant is established, as it will be very soon after the railways are ready to guarantee work for it.

HONEST GOLD AND SILVER GOODS.

AN Act has been introduced in the Canadian Senate for the purpose of protecting the public from fraudulently marked gold and silver articles. To-day a person purchasing the precious metals in the form of jewelry, plate, watches, etc., can tell nothing about the actual quality of the goods. They may be marked 18K when they are several karats less; so also they may be marked sterling silver when they are not anywhere near that standard. It is impossible for the purchaser to detect such frauds. In cases where the goods are wrongly marked the retailer's assurance may be the means quite unintentionally of effecting the sale.

The Act aims also to prevent the giving of time guarantees with plated articles. These guarantees have been used so extravagantly that they have become almost ridiculous. Solid gold articles sell without a guarantee. As a rule, the less gold there is in an article the longer the guarantee. It would be a mistake to condemn all such guarantees as worthless, for as a matter of fact reputable manufacturers will generally replace goods so guaranteed. What the reputable ones do is to take a chance that only a very small percentage of claims will ever be made. And few claims are made, owing, no doubt, to the small amount involved

and the trouble experienced in making and proving claims. The guarantee is used for the express purpose of encouraging a sale.

There is a class of salesmen, known as peddlers, who frequently carry goods marked for the express purpose of fraud. These marks are absolutely no guarantee, and the salesmen assume no responsibility.

The Act in question provides that a manufacturer need not mark his products unless he likes, but if he does mark them, all marks must be correct, and he must assume responsibility by stamping all articles with not only a quality mark, but also with his trade mark.

The Act exempts goods bearing the Hall Mark of Great Britain or the Government marks of other countries. It makes provision for foreign firms who have registered their trade marks in Canada, and imposes penalties for infringements.

The object of the Act is to protect the public; to put the gold and silver trade of Canada on a basis similar to that enjoyed in England; and to protect the articles of honest manufacture from the fraudulent goods of dishonest manufacture. No one can quarrel with such legislation, and it is hoped that the Parliament now assembled will give such an important subject the attention it deserves and pass a Bill which will effectively deal with the abuses which are everywhere apparent.

TECHNICAL EDUCATION.

IN the industrial development of a country natural resources count for much. Of the utmost importance, too, is capital. But latent natural wealth and the developing power of capital are sterile without skilled mechanics. Efficient workmen are absolutely essential if industries are to prosper. If one man can increase the speed of a machine, even to the smallest extent, the shop in which he works is placed in an advantageous position in the industrial race.

There is a distinct lack of competent workmen in Canada to-day. Through the operation of the Alien Labor Act, mechanics cannot be brought in from the United States under contract. This is a great hardship to our manufacturers, whose operations are stunted by the impossibility of getting sufficient help. Never was this want felt more keenly than it is to-day, when manufacturers throughout Canada are crying out for men to fill their factories. The old apprenticeship system, too, by which skilled workmen were formerly trained, is rapidly disappearing. Nor have the labor unions, which have been chiefly instrumental in doing away with this system, established trade schools to replace it. This is not much to be wondered at since our country is young and progress along this line must be gradual.

However, if artisans can neither be brought from foreign countries nor trained in the shops here, some system of technical instruction must be provided in schools. It was with a knowledge of these facts that a deputation waited upon the Premier of Canada and some of his associates, last month, and presented the petition on Industrial Education, which appears in another column.

The text of the petition is a convincing statement of the various phases of the question. The document is short, yet it states exhaustively and clearly the work being done by other countries in the line of industrial education and the necessity for similar action in Canada. In many cases, unfortunately, employers and laborers do not see eye to eye with one another. It is an encouraging fact that in this

case there are no differences of opinion. The Labor Convention, the Canadian Manufacturers' Association, and the heads of the important educational institutions, all agree that technical education is a necessity for a country which expects to win in the industrial race.

In discussing the petition some newspapers have fallen into the error of thinking that national schools were asked for. They argue, from this false promise, that the Dominion Government cannot act, since education falls within the sphere of the provinces' activities according to the Act of British North America. It requires but a perusal of the petition to show that what is asked is a Commission of Enquiry, not a national school system. The point is that every province is feeling the need of such education and that the commerce of the country as a whole is suffering from its absence. Undoubtedly then, the economical and satisfactory method of procedure is for the Federal Government to institute a broad and comprehensive enquiry into the whole subject in order that the several provinces may be able to work out a consistent policy for the training of skilled workmen.

The Government, in appointing a select Commission, will be conferring a wide and lasting benefit. Our industrial growth is constantly introducing new problems and we must study to anticipate them. Too much emphasis cannot be laid on the importance of efficient work. On it depends the whole industrial life of the country. It is sincerely to be hoped that a commission will be named and that it will give the subject of education for industrial efficiency a thorough investigation.

THE METRIC SYSTEM BEING ADVOCATED BY THE DOMINION GOVERNMENT.

ALTHOUGH INDUSTRIAL CANADA has frequently presented the views of pro and anti-metricists, it has been unable to find that any person, class or even the Dominion Government is suffering because this doubtful system had not been officially recognized. No Canadian business man or business organization is making any particular effort to have the same introduced. One man in Canada, however, Prof. McLennan of University of Toronto, is visiting towns and cities throughout the country lecturing on the system. He is paid by the Dominion Government to do this in order that business men might have an opportunity of having explained to them, in a clear and concise manner, the principles and possible advantages of the system. The intention is evidently purely educative—would that the Government would spend its money on technical education of a kind that would be of real benefit. Unfortunately the intention has been disregarded. Prof. McLennan's lectures are mapped out for the express purpose of advocating the system. This is no part of the duty of our Government. Is the Government to pick on any system of weights and measures it wishes and spend the people's money to make them believe that it is the right system? We doubt, very much, if it is, and we particularly doubt it when we consider:—

1st.—That the Premier of Great Britain, Hon. Mr. Bannerman has recently refused to allow a discussion of the system on the floor of the House.

2nd.—That recent instructions of the Foreign Office of the Empire to all British Consuls have been to the effect that all references to quantities, weights, measures and values shall be given in British standards.

3rd.—That the Metric System Bill known as the Littaer Bill, before the House Committee of the United States Congress on coinage, weights and measures was defeated.

4th.—That the Postal Congress at Rome, Italy, refused to allow any changes in weights for letters which would require calculation in the metric system.

5th.—That the proportion of Canada's trade with metric countries is not 2 per cent. of its trade with non-metric countries.

In spite of these facts the Government through Professor McLennan is advocating the adoption of the system. It is not to be expected that anyone will attend Professor McLennan's lectures with the intention of presenting the many arguments against the system. Professor McLennan is supposed to be delivering a lecture and not taking sides in a debate. The subject is one that entails a great deal of study, but the opinions opposing the same appear to be just as numerous as those advocating it.

The Canadian Manufacturers' Association has put itself on record in a resolution as follows:—

"That the Association request the Government not to take any action to encourage the adoption of the Metric System until such time as action is taken by the British Government," but the Dominion Government has declined to take action.

INDUSTRIAL CANADA does not at present either advocate or oppose the system; it does object to a campaign under the auspices of the Government; it would also suggest that Boards of Trade and other organizations consider the actual effect on Canadian industry that the introduction of the system would have before passing resolutions favoring the same.

STATIONARY ENGINEERS' BILL.

HENRY CARSCALLEN is at present a member of the Ontario Legislature, representing the important manufacturing constituency of Hamilton. His name is recognized as one of considerable weight in Parliamentary matters, and some newspapers have even gone so far as to mention him in connection with a Cabinet portfolio. Therefore his services to Ontario at the recent session of the Legislature are worthy of attention.

He takes credit, no doubt, for the introduction of at least two Bills. One of these was for the purpose of preventing anyone except a lawyer from filling in an ordinary conveyancing form. Mr. Carscallen, of course, is a lawyer, and this would probably have brought a few more deeds to his office for attention. He did not seem to think of the number of responsible and intelligent men who perform this service, and are at the present time obtaining therefrom a considerable part of their livelihood. The Government, however, was wiser than Mr. Carscallen, and the Bill was withdrawn.

The other Bill standing in Mr. Carscallen's name, and which, unfortunately, the Government saw fit to let pass, not for the reason that the objectionable features were not called to their attention, was an Act to amend the Act respecting Stationary Engineers. This Act is probably the worst example of class legislation that we have on our Statute Books. It provides that no person shall operate or have charge for more than thirty days of any steam plant operating an engine of 50 h.p. or over who is not a holder

of a certificate of qualification under this Act. It must have been a mistake of Mr. Carscallen's or of the stationary engineers that the examiners for these certificates are to be appointed by the Government. The Board of Examiners, however, are so absolutely dependent on the Board of Management, which is the controlling board of the stationary engineers' organization, that the mere fact of appointment will have very little effect.

The Act provides that there shall be a fee for examination, and also that there shall be an annual fee. These fees do not go to the Government as one would expect, but go into the hands of the Board of Management, not the Board of Examiners, of the organized stationary engineers.

To say there are seven thousand engineers in Ontario who would come under this Act would be making a conservative estimate. If the examination fee for the first certificate is \$5, it puts into the hands of the Board of Management of the Stationary Engineers \$35,000. If in each subsequent year the annual renewal fee is \$2, it gives to the same board \$14,000.

This Board of Management is to pay the Board of Examiners. They have the power, however, to pay officers of their organization who have nothing whatever to do with examination; in fact, they have the absolute control of this money, and, looking at it from probably the worst standpoint, they could, if they so wished, use the same to organize and to fight a strike.

There is no doubt whatever that under the Act as passed every engineer in Ontario having charge of a boiler as above will be compelled to become a member of the Ontario Association of Stationary Engineers. This was the real purpose of those who were instrumental in getting this legislation passed; that is, to make it compulsory to have every engineer become a member of the Association.

The actions of this original Board of Management are not in any way subject to the approval of the Lieutenant-Governor in Council or the Minister of Agriculture, and it may pass any regulations or by-laws it wishes.

The Ontario Government have no excuse for passing such a measure. It was by no means a new Bill with the Legislature. A similar Bill was before the late Government on several different occasions, and its defects were recognized and the Bill thrown out.

We are of the opinion that, notwithstanding Mr. Carscallen, if the time of the Government had not been so occupied with other legislation, which appeared to be more important, the Bill would never have passed in its present form. It does not become effective until the first day of July, 1907. The Government should look into this Act at once, should not appoint the Board of Examiners provided for in the Act, and should see that the Act is amended at the next session.

INDUSTRIAL CANADA has no objection to an Act which provides for the compulsory examination of stationary engineers. Such examination, however, should be under the control absolutely of the Government, and the fees paid for certificates should form part of the funds of this Province.

INDUSTRIAL CANADA will favor a stringent Act, so far as examinations are concerned, but there is no reason why every engineer in our Province should be compelled to identify himself with and help maintain for all time to come the close corporation which now exists.

MUTUAL FIRE INSURANCE.

A NUMBER of the recognized official "old line" insurance journals have in recent issues discussed the subject of "Mutual Fire Insurance" in its relation to manufacturing risks, and they have naturally expressed views antagonistic to those stated in the April number of this journal. We assume their attitude to be "natural," because of the very fact that they derive their support from, and are inevitably associated with the function of stock fire insurance, but we should be sorry to have the term interpreted as indicating any impression that we believe the views so expressed to be subsidized or ill-considered. Primarily, of course, the view-point affects the consideration of and conclusion reached on any given subject, and the insurance press, allied with the old line stock interests, must be expected to be influenced by a full degree of prejudice and bias.

The "Insurance and Financial Review" of May 15th, for example, uses the illustration of the San Francisco fire as "discrediting mutual organization," and quotes from the article in our April number a paragraph bearing upon the subject of conflagration hazard upon the mutual fire insurance interests of our members. In a few words the "Review" seems to settle for all time the fallacy of mutual fire insurance because San Francisco has once again produced in extenuated form the "old enemy of mutual fire insurance—conflagration." So much for the view point of this organ.

Our View Point.

Our own view point is clearly expressed in the article in the April number of INDUSTRIAL CANADA, which is quoted by the "Review" as follows:—

"It must be borne in mind that the subject has only been approached by the Association from the standpoint of the manufacturer. The one weak spot in the business of fire insurance as ordinarily conducted is the conflagration hazard; this has been the cause of numerous failures of insurance companies, and is the alleged cause of recent increases in rates. Broadly speaking, the manufacturers' risks are outside of the conflagration area; they are, as a rule, situated in the outskirts, where land is cheap and where good switching arrangements can be made; consequently the one particular hazard applicable to the conduct of the business of an insurance company is removed and the most vital objection to the mutual company is eliminated."

Now, if conflagrations in general have demonstrated anything at all, they have surely proved conclusively whether our view point is or is not correct. A clear-cut, well-defined issue is at stake; if we are in error, then the conclusions built upon the fallacy are unworthy of credence, and should be branded as false, illogical, unwarranted, or in any other more expressive language that can be commanded for the purpose. If, on the other hand, the conclusions are justified, let them set at rest and decently inter, without hope of resurrection, the bugaboo raised by the "Review."

But San Francisco is fresh in the public eye, and the "Review" and its allies might well show what the effect of this greatest disaster of the world's history has been on mutual fire insurance companies, and particularly as they are seeking to discredit our view point, upon those mutual companies transacting a purely manufacturers' business.

We have ourselves made some investigation, and have enquired as fully as circumstances permitted into the whole question, for we wish to be kept well posted, and to avoid making the mistake of recommending our members to adopt a course in respect to fire insurance that falls short of the best, cheapest, and most adequate.

So far as we can ascertain, the stock companies are nearly all "badly shaken"; some have succumbed, and the general impression is that within the next sixty days there will be further evidences of weakness. We do not know of any mutual fire insurance company that has succumbed or is likely to go out of existence by this disaster. But this proves nothing.

Mutual Companies Lose Nothing.

We have, however, definitely ascertained that not one of the purely manufacturers' insurance companies that have been under the investigation of our Insurance Department, and referred to more generally in our April number, has lost a single copper by the Frisco disaster! This proves clearly that the conclusion reached in the quotation above given is just and fair, all prejudiced or biased views to the contrary notwithstanding. If the fact just stated, and conflagrations generally, warrant any other conclusion as far as our interests are concerned, let there be no hesitation in stating them, for we welcome most heartily anything that will throw any light on the situation.

Another criticism of our April article comes from "Office and Field" of May 10th. The tone of this critic is of a higher type than the common run; indeed, the diminutive paper (diminutive in make-up, not in material) is an excellent medium, and is of such a good tone and character as to merit a well-deserved success. The article to which we refer admits that mutual insurance "has its place and its function," and winds up with the timely suggestion to those interested that the attitude of "the Manufacturers' Association Executive is a sign of the times which should not be neglected."

Between the two extracts we have given, "Office and Field" make the statement "that it is a capital error to assume that because this (i.e., mutual fire insurance success) has been the case at one time or another, therefore it is the natural and permanent condition of affairs." It is difficult to follow or agree with our contemporary here for the reason that if fire insurance owes its origin to mutuality, if in essence it remains mutual, and if it has its place and function, why should it not be permanent? If there are any pronounced signs of the times at all, they are surely pointing to the return in practice to the early principles upon which the system was founded; and for ourselves, we are satisfied that the whole tendency of stock fire insurance is to encourage if it does not necessitate the organization of manufacturers in a combination for the protection of their mutual fire insurance interests; this is "a sign of the times which should not be neglected!"

The Meaning of Mutuality.

Then our contemporary swerves in his argument and attempts to minimize the effect of mutuality in fire insurance by the plausible yet illogical statement that "every business can be shown to be mutual, for the money paid for goods . . . must pay for everything . . . and a profit besides." There can be no true mutuality where the question of profit enters into the calculation; it is the profit that creates the line of demarkation between stock and mutual companies, for it not only adds to the cost, but it introduces the bad element of intense competition.

Mutual fire insurance means cost, it means adequate fire protection, it means careful selection of risks and distribution of liability; the history of the past and the practice of the present leave no room for doubt but that the results of the future in this class will fully justify the endorsement the Canadian Manufacturers' Association has given to the operation of Canadian companies, organized and conducted on strictly mutual principles.

CANADA'S PROGRESS IN POPULATION

By W. D. SCOTT, Superintendent of Immigration, Ottawa.

A LEADING Canadian statesman has placed on record the statement that, in progress and prosperity and in matters of material increase all along the line, "the twentieth century belongs to Canada." Certainly, in the matter of increase in immigration the phrase is bound to apply, for in no country of similar population is it possible to duplicate the magnificent annual increase which

of 14,808 men in the three years named. Taking each man to represent five persons, the total affected by the naturalization papers of 1902-3-4 will be 74,000 persons, leaving, without taking into account losses by death, about 50,500 persons who remain aliens after they are able to become naturalized Canadians, or less than one per cent. As a foreigner has to be in Canada three years before he can obtain a naturaliza-



What Settlers are Doing. Horse Ranch with 975 horses, 40 miles south of Medicine Hat.

Canada has made since the century began, and is bound to make as the century advances. Following are the records for the past six years:—

1900	23,895
1901	49,149
1902	67,379
1903	128,364
1904	130,331
1905	146,266

The census returns of 1901 gave the number of persons of foreign birth in Canada at 278,449 or 5.2 per cent. of the whole population. The same returns showed that 153,908 persons reported themselves to be naturalized, leaving 124,541 persons in April, 1901, not naturalized. The returns under the Naturalization Act of 1902, show that 3,813 persons were naturalized in 1902, 6, 593 in 1903, and 4, 402 in 1904—a total

tion certificate, the foreigners who came in since 1903 are not naturalized.

Source of Settlers.

The largest flow of immigration in the past six years has been from the United States, the British Islands coming next. In that time 191,163 Americans have cast in their lot with Canada, the larger number settling in the prairie provinces. They make excellent settlers, as most of them thoroughly understand prairie farming and the working of machinery necessary for taking off large crops. The immense growth of the crops in the West during the past few years is attributable in no small degree to the pluck, perseverance, energy and skill of the American farmers who have become residents of that magnificent section of Canada.

The European settler naturally has a lot to learn along the line of Canadian farming, especially when it is con-

ducted on a large scale—as is the case in many parts of the West—but when he gets his grip on the idea he usually does well. As a result, there are many cases of highly successful farming by British and European settlers who had everything to learn when they came to this country, but who took willing hold from the start. This is the class of settler that is wanted in Canada. Mr. W. T. R. Preston, the Canadian Commissioner of Emigration in Britain and Europe, had the right idea in his mind when he published the following warning in the public press:—

"It must be remembered that the Government is not carrying on a propaganda for indiscriminate emigration to the Dominion. No inducements are held out in any way of promises to emigrants of an easy time and a speedy accumulation of wealth. Prospective emigrants looking forward to a life of luxury, with little or nothing to do, are advised not to go to Canada. The Dominion only desires an addition to its population of those who are willing to work, and who are not averse

come to Canada who have not been of the calibre to ensure success goes without saying, but, taken all in all, the results of the policy that has been adopted have been most gratifying.

Encouragement to Agriculturists.

The efforts of the Immigration Department are now directed, to a greater extent than ever before—if that be possible—to encouraging the best class of agricultural immigration to Canada. The impetus that has been given to wheat-raising and mixed farming in recent years has proved that Western Canada needs only a larger agricultural population to make it the granary of the world. It has been demonstrated that new areas for farming are to be found in every part of the country, and, with the advent of new railways which are fast "gridironing" the West, the territory open to cultivation will be largely increased.

So that none but the most desirable class of immigrants may be obtained, a rigid system of inspection has been



Sheep Ranching. A 3,500 round-up.

to tackling the new conditions of life with energy and determination.

"In many respects emigrants, on arrival in the Dominion, will be surrounded with somewhat different conditions from those to which they have been accustomed. In so far as they prove themselves worthy of confidence, however, they will be given cheerful encouragement and a hearty welcome, and Government officers will assist in finding employment for the right class.

"In carrying on an emigration propaganda, the Canadian Government not only advise but warn. There is no desire to present unduly advantages of emigration to the Dominion without, at the same time, directing attention to the probable experiences of each emigrant. Therefore, it is all the more necessary, before finally deciding this momentous question, for all contemplating emigration to read with care and thoughtfulness the Canadian Government publications."

This letter, which had a wide circulation in the press, had a steadying influence on the movement to the Dominion and, as a result, the proportion of "misfits" has not been so large as might otherwise have been the case. That some have

closely followed at the several ports of entry at either Coast, and with greater facilities in enlarged immigration buildings at all the Atlantic ports, and increased experience on the part of the officers, the work of inspection is now of a very satisfactory character. Since the hospital service, under the supervision and control of the Department, has been instituted at the several ports the work of treating immigrants detained on account of disease has gone on with ever increasing efficiency and freedom from complaint. That this work of inspection has resulted in the exclusion of many diseased persons and others undesirable, owing to physical or moral defects, will be evident when it is stated that of the total immigrants landed at Quebec, Halifax, St. John, and Montreal 498, and of those landed at Victoria and Vancouver 113, were refused an entry to Canada, and were returned by the steamship companies to the ports whence they sailed.

Home-seekers from United States and Britain.

But whilst every effort is made to keep out undesirable immigrants, along the lines stated, strenuous methods are adopted to bring to the fertile lands of the West a farming population that will be a credit to Canada, and a benefit to

the world at large. To that end, special exertions are put forward by the agents in the United States and in the British Isles so that the high standard of the past five or six years will be maintained and, possibly, improved upon. The American immigrants make excellent settlers, owing to the fact, already stated, that the majority of them are adepts at prairie farming; also that they bring in large capital and improved machinery for farming purposes. The British come next in the matter of capital, as the following excerpt from the report of Mr. G. H. Mitchell, Canadian Government Agent at Birmingham, bears testimony to:—

"The cash which is transferred to Canada with these emigrants in twelve months must be enormous, and it was brought forcibly to my notice only a few weeks ago by my ascertaining that the capital possessed by the callers I had during one morning aggregated between £5,000 and £6,000 (\$25,000 to \$30,000). As this is going on, more or less, every day of the year, the influence of

Use of Alcohol.

That untaxed alcohol would largely displace kerosene for lighting purposes, especially in rural communities, is certain. It is both cheaper and safer than kerosene. In many sections, and for many purposes free alcohol would also be the cheapest and best substance for heating purposes. It would probably largely displace kerosene and gas for use in stoves, either for heating or cooking. But it is in the production of power, in sections remote from coal mines, and for explosive gas engines, that alcohol excels all other substances. For motive power for automobiles, for motor boats and cars, for pumping stations, for dairy and other agricultural purposes, alcohol costs less, is safer, less disagreeable and obnoxious, and in every other way better than gasoline. For many purposes alcohol is far preferable, as a power producer, to steam, electricity or ordinary gas.

In view of these and of many other similar facts, it is



Old and New Homesteads. The experience of one settler illustrated.

this money on Canadian trade, both internal and external, is hardly calculable."

Thus, it will be seen that the work of the Immigration Department is no small factor in the policy of "building up Canada," which has been so widely advertised of late by the *clientèle* of INDUSTRIAL CANADA. Men and money to provide a new market for the manufacturers and others are obtained through the exertions of the Department officers, and the gratifying feature is that it is new business brought into the country instead of a traffic that has to be sought for outside. Last year, with an immigration aggregate of 146,266 and a bumper wheat crop of 90,000,000 bushels in the West, Canada smiled from the Atlantic to the Pacific; and this year there are many who predict that an immigration aggregate of 200,000, and a wheat crop in the West of 120,000,000 bushels are not outside of the possible.

The Galt Box Company have secured a location for their factory, and work has begun on the building. It is expected that the factory will be completed by July 1st.

probable that free alcohol would open up a new era in our industrial progress. More than that: It would save our mines and forests, preserve the health of our workers, and give our farmers bigger and better markets for grain and vegetables. Not to remove this tax of over 1,000 per cent. on this basic material in manufacture, is as foolish as would be a tax of 1,000 per cent. on iron, coal or cotton.—Moody's Magazine.

The annual report of the London, Eng., Chamber of Commerce, for the year 1905, just issued, contains an account of the trip of members of the Canadian Manufacturers Association to England last summer. The arrangements for the entertainment of the visitors were in the hands of the London Chamber, and how well they looked after their guests needs no telling. The published list of the places visited shows how complete the arrangements were. The pages devoted to this subject in the official report just published will recall many pleasant memories to those who had the good fortune to be on the excursion.

COMPLAINT *re* TRANSCONTINENTAL RATES

Discrimination Against Eastern Canadian Shippers Argued before Railway Commissioners.

THE hearing before the Board of Railway Commissioners of the complaint *re* transcontinental rates has been concluded. The defense by the railways and the reply of the manufacturers was as follows:—

Railway Defence.

The Canadian Pacific Railway defended its action in charging higher rates upon shipments from all Eastern Canadian points than upon similar traffic originating in Eastern United States by claiming that water competition forced the low basis of rates in effect from United States points while such competition did not affect traffic from Canada. They alleged that the Canadian railway, in order to secure a share of the traffic coming from the Eastern United States must necessarily accept a proportion of the through rates which are found to be in force via the competitive all-American routes. They claimed it to be in the interest of Canadian shippers that they should be permitted to haul this freight even at the lower rates, in order to swell the volume of traffic passing over their lines which, they said, assisted in making up through trains, effected reductions in the cost of handling, and enabled them to give a better service for all traffic involved. A further allegation in support of their position was that they had to haul empty cars west to the Pacific Coast in order to bring out the eastbound traffic from over sea, and freight, such as lumber and salmon, originating locally in British Columbia.

Imports.

A statement of goods imported from United States into British Columbia was filed, and considerable testimony given by the traffic officers of the railway as to the amount of goods imported for consumption on the Coast in comparison with shipments from Eastern Canada. The burden of this testimony was to the effect that the Canadians were holding the market on practically all lines, and that this was an indication that the freight rates did not place the Canadian manufacturer at a disadvantage.

Rate Basis.

It was explained that the rates in effect from points between Montreal, Windsor, and the Soo were made by taking the Chicago rates as a basis, and adding thereto arbitrary rates, commencing at 25 cents on the first class, and scaling down to 13 cents on the tenth class. Chicago was said to have been taken as a base, because it was an interior point not influenced by the water competition, and the arbitrary rates added from Ontario and Quebec points were alleged to be far below the local tariff rates, and, therefore, reasonable.

The chief engineer of the railway gave testimony as to the excessive cost of operation on the Canadian Pacific Railway owing to heavy grades on the transcontinental line to overcome, mountain summits, large expense for fuel, and for maintenance of snow sheds, and other incidentals which add greatly to the cost of operation of this line in comparison with other transcontinental railways. For these and other reasons the railways contend that their rates were absolutely reasonable and just, and that the discrimination was not such as would come within the prohibition of the statute.

Reply.

In reply to the railways, it was alleged for the complaining manufacturers that the rates as at present in effect

were not entirely due to the competitive influence of water, as alleged by the railways. It was shown that the rates from the United States were applied on a flat or blanket basis, practically from all territory east of the 97th meridian. This was done by the railways in their own interests in order to develop the traffic in the interior and not on account of water competition.

Attention was called to the fact that formerly the Canadian territory was given rates properly related to those from the adjacent United States shipping points, and that the change was brought about, first, by the addition of an arbitrary rate of 5 cents per 100 pounds to British Columbia Coast points over United States Coast points, and, later on, by the addition of further arbitrary rates from Eastern Canadian territory to Chicago, these arbitraries being retained upon Canadian traffic notwithstanding the fact that the rates from New York, Boston, Pittsburg, Buffalo, Cincinnati, Detroit, were the same as in effect from Chicago. Reference was made to reports of the Interstate Commerce Commission of the United States, dealing with the question of transcontinental rates which supported the contention of the manufacturers. By one of these reports it was shown that the United States lines had on several occasions alleged before the Commission that the Canadian Pacific Railway had entered the field in competition with other transcontinental lines on a lower basis even than previously prevailing. In fact, the Canadian Pacific competition was cited by several transcontinental roads in justification of their position when they were charged with discrimination before the Interstate Commerce Commission.

Another point made was that the difficulties as to operation complained of by the Canadian Pacific could be overcome by shipping from Ontario and Quebec via Chicago, and the American Transcontinental lines, but, notwithstanding the fact that there were several railways leading to and from St. Paul, the rates by this route were also on the higher basis as imposed by the Canadian Pacific. The effect was that the United States lines leading from St. Paul to the Coast were actually able to secure greater earnings when they hauled traffic originating in Eastern Canada than when hauling similar traffic originating in the adjacent United States. Therefore, while the railways protected reduced rates from United States on the ground of alleged competition, higher rates were exacted upon Canadian shipments, apparently in spite of such competition.

In answer to the claim with regard to the increase in volume of traffic keeping down the cost, it was pointed out that the Canadian manufacturers did not desire to prohibit the Canadian line from participating in the haulage of any American tariff which they could secure, but they did object to such traffic being hauled past their doors at lower rates, to compete with them in the same markets of consumption. They objected to the railways assisting American competition by hauling at low rates and then charging higher rates to the Canadian to make up for any losses.

As to the imports from the United States, it was claimed for the manufacturers that the statement of imports as filed indicated that practically every article made in Canada was imported in more or less quantities from the United States. The contention of the railways that because the bulk of business was done from Eastern Canada the manufacturer was not disadvantaged, was shown to be fallacious, because the

Customs returns could not be taken as an indication of the measure of the competition. It was self-evident that the Canadian manufacturer's price could not be made in utter disregard of the price of the competitive United States manufacturer, and the freight rates which he enjoyed. Consequently, in order to secure the business, he had to meet the conditions and to take care of any difference in freight rates by a reduction in price.

It was also pointed out that the railway itself, in responding to the complaint of the Board of Trade in Vancouver with regard to rates to Calgary, had alleged in support of higher rates from Vancouver than from Winnipeg, that the interests of Canada demanded that the Canadian manufacturers should be protected, but in this case, the trans-continental case, they were absolutely disregarding the interests of the Canadian manufacturer in their anxiety to handle the traffic of his American competitor. It was pointed out that the manufacturers were not seeking for lower rates than in effect from Eastern United States territory. All that was asked was equality, and this surely they were entitled to.

Customs Duties.

The Customs tariff was alleged to be the real reason why the Canadian was able to hold the market in competition with the American. But for the duty, the Canadian manufacturer could not market his goods upon the Coast at all in competition with a manufacturer located in the Eastern United States who was given a lower basis of freight rates. A question, therefore, to be considered was; had the railway a right to take advantage of the situation and impose a higher freight rate upon Canadian traffic because of the Customs tariff. If the duty was imposed for protective purposes, surely the railway had no right, by charging higher rates, to take away to some extent the protection accorded the manufacturer. Should not the action of the railway commissioners in considering the complaint comport with the policy of the Government in this regard? During the recent sittings of the Tariff Commission, where attention was called to the exaction of higher freight rates upon domestic goods than charged upon like goods imported from foreign countries, the representatives of the Government on that Commission advised applicants to take the matter to the Railway Commission for adjustment.

It was contended that no sound reason had been shown for the selection of Chicago as the proper point upon which to base rates from Canadian territory. There appeared to be no more reason for selecting Chicago than Buffalo, Detroit, New York, or Boston. If the rates from Chicago were reasonable as alleged, then surely the rates from Detroit, Buffalo, Boston, and New York were also reasonable, and being the same as Chicago ought to apply from the intermediate Canadian territory.

It was pointed out that in all probability, were it not for the Canadian Pacific Railway, the Eastern Canadian manufacturer could still be shipping by way of Chicago and the United States lines, and would doubtless be enjoying the same rates as are accorded to other shippers by that route from the Eastern United States.

The Railway Commission reserved its decision.

The Canadian Smelter Company have installed a smelter at Pilot Bay. This is a valuable addition to the mining industries of the West. It is handling 100 tons of lead concentrates a day, averaging about 78 per cent.

INTERSWITCHING.

In the amendment to the Railway Act now before Parliament an important provision relating to interswitching facilities has been introduced by the Minister of Railways. While the Railway Act proves that "according to their powers" railway companies shall provide all reasonable facilities for the interchange of traffic, it has been ruled that where transfer tracks have not been constructed the railways have not the power to afford the facilities for interchange. This is a decided hardship upon those communities which are served by more than one railway, the tracks of which have not been connected. For example, the town of Galt is served by both the Canadian Pacific and the Grand Trunk railways; these lines intersect and a transfer track could be conveniently constructed just east of the town. The manufacturers are extremely desirous of securing interswitching facilities, so as to enable them to ship and receive supplies over either line, but, so far, they have been unable to secure them. There are no physical obstacles in the way, and the only explanation of the absence of interswitching facilities is the disinclination of the railway companies to provide them. On the other hand, these same railways have joined their tracks at various other points where manufacturers are located with whom the Galt manufacturers must necessarily compete in the markets, for instance, Hamilton and Brantford.

Under the amendment to the statute which is now before Parliament an application to the Board of Railway Commissioners may be made to require the railways to establish the necessary facilities, and if, in the opinion of the Board, a transfer track is necessary or advisable in the interests of the public, it may be ordered to be constructed. Without a provision of this character manufacturers located at points where transfer facilities are not provided are subject to the caprice of the railway officials, and are severely handicapped in the purchase of supplies and in the shipment of materials, because of their inability to ship and receive over their sidings by one line of railway only. The change will be welcomed by municipalities like Galt, Guelph, and Berlin, where, notwithstanding the urgent appeals of the interested manufacturers interswitching facilities have heretofore been refused.

Canada America's Granary.

Decidedly interesting is J. J. Hill's prediction that the United States will soon be the best customer for Canadian wheat. The orders from across the line will, he says, increase every year in an astonishing manner, and "later on it may tax Canada's capacity to supply the needs of the republic." Coming from so eminent an authority, this is, from the Canadian standpoint, a highly satisfactory statement. Mr. Hill puts in characteristically emphatic language the oft-repeated assertion that the rapidly-growing population of the United States will soon overtake its highest possible output of foodstuffs, and that as a result our neighbors will have to turn to Canada's Western wheat plains for their supplies. When that time arrives the Canadian prairies will become the granary of the United States as well as the "bread basket" of the Empire. We shall then have two great markets instead of one, as at present, and the value of our farm lands may be expected to appreciate accordingly. Perhaps the only great competitors we have in the future to face in the matter of wheat growing are Manchuria and the Argentine Republic. But we imagine that the continued rapid growth of the world's population will at least, in a measure, take care of the surplus from these countries.

ASK COMMISSION ON TECHNICAL EDUCATION

Deputation Presents Petition to Government.

To His Excellency the Right Honorable Sir Albert Henry George, Earl Grey, Governor-General of Canada, in Council:

Sir,—Your petitioners, representing the Canadian Manufacturers' Association, beg to present the following resolution, unanimously passed at the last Convention of Manufacturers, asking you to appoint a commission on technical education. It reads as follows:

"Be it resolved, that the Dominion Government be requested to appoint a commission to report on the best method for establishing a comprehensive national system of Technical Education to Provide Canadian industry and commerce with trained assistants from amongst the Canadian people, and thereby aid in developing Canadian industry, and do away with the present condition of affairs, which compels employers to go abroad for men to occupy the more responsible and more remunerative positions in Canadian enterprises."

The importance of technical training and of technical research to national development needs no emphasis. Along with large individual enterprises a vast number of smaller ones are springing up here, and Canada is rapidly becoming an industrial country. Yet the question of how best to provide for industrial education has never been thoroughly considered. Indeed, as regards settled educational opinion, to use a phrase of Mr. Gladstone, it is a "floundering moment." Practically every Province has the problem before it now, or it will have in the very near future. Accordingly, to arrive at some conclusion as to our educational wants, and as to what help may be expected respectively from the Dominion Provinces and municipalities are matters of general interest. It is truly impossible rightly to value the benefits that would flow from concerted, systematic action.

Prompt consideration is all the more urgent because of a curious anomaly. The Alien Labor Act prohibits business men from importing technically trained help from the United States. Yet no serious effort is being made to give Canadian artisans facilities for securing the necessary expert knowledge.

The resolution we are submitting to you has been endorsed not only by the Convention, but by each Branch of the Manufacturers' Association at Toronto, Montreal, Quebec, Halifax, Winnipeg, and Vancouver. So that it embodies the matured wish of industrial leaders from the Atlantic to the Pacific. (1)

It is significant that the Labor Convention held in Toronto last September passed a similar resolution. Capital and labor are thus a unit in asking you to provide for a careful survey of the field of industrial education. (2)

Our leading Universities have endorsed it. Letters supporting it have been received from the Principals of

Laval, McGill, Toronto, Queen's, and Dalhousie Universities. (3)

In fact, the only objection suggested by any one is the apparent obstacle of the B.N.A. Act, which leaves education to the Provinces. But the same Act also entrusts the regulation of trade and commerce to the Dominion; and we shall point out how Federal Governments other than our own have felt constrained to interpret the expressions "education" and "regulation of trade and commerce" in the light of modern needs. We shall point out also how our own Dominion has felt it necessary to move in the same direction. The B.N.A. Act, therefore, is no barrier to action.

As an example of the policy of Federal Governments in other countries, permit us to first cite Germany:

The Example of Germany.

When the German Empire was reorganized in 1871 an important part of the central Government's trade policy was its provision for an Imperial Physical and Technical Institute. This institute determines standards as well as carries on research for the general benefit of German industry. Under the presidency of some of the most eminent scientists its certificates of quality to various German manufactures and its expert suggestions explain in no small measure the rapid progress and heretofore unrivalled position of German instruments of precision. Supplementing it is the Imperial Industrial Museum at Berlin, which in completeness and magnificence has become an example for all the world of the great help a Museum can be to mechanics, designers and others. The Imperial Government also aids the Shipbuilding and

Navigation Schools on the Baltic.

The Example of Switzerland.

In Switzerland decentralization is the keynote of the Constitution, and education, apart from the maintenance of a central University, is in charge of the Cantonal Governments. Yet the Federal Government supports agricultural, industrial and commercial instruction in the cantonal colleges. It has also established in Zurich, on behalf of industry, a physical laboratory which is regarded by some as the greatest of its kind in the world. (4)

The Example of the United States.

With regard to education the Constitution of the United States is in many ways most like our own. Yet in 1867 the Federal Government established a Bureau of Education for the double purpose of collecting and diffusing information likely to promote the cause of education. (5) In fact, before the middle of the century Federal aid to industrial education had been advocated on the ground of national interest in trade and industry. In 1862 Congress adopted a favorable attitude and passed the Morrill Act, entitled "An Act donating Public Lands to the several States and Terri-



MR. S. M. WICKETT
Who headed the deputation which waited on the
Federal Government on the Question of Technical
Education.

tories who may provide Colleges for the benefit of Agricultural and Mechanical Arts." Thirty thousand acres of public lands for every Senator and Congressman was granted to each State. Instruction was to be given in "such branches of learning as are related to agriculture and the mechanic arts in such a manner as the Legislature of the States may respectively prescribe in order to promote the liberal and practical education of the industrial classes in the several pursuits of life." These land grants amounted to 13,000,000 acres of an estimated value of over \$12,000,000.

A second Morrill Act was passed in 1890. It provides for an appropriation for each State of \$15,000 in 1890, which was to increase each year by \$1,000 until it reached a fixed maximum of \$25,000. (6) This second grant amounts to more than \$1,500,000 per year, all of which means that the Federal Government now furnishes 40.8 per cent. of the revenues of all schools of technology. (7)

Recently the United States has followed Germany in establishing a combined research and standardizing institute. In the new Department of Commerce and Labor this Bureau of Standards publishes the results of its researches, issues certificates of quality, and is rapidly becoming a consulting authority of the greatest value to American industry.

Federal support of the magnificent National Industrial Museum at Washington is also an item of prime importance.

The Example of England and France.

In England one outcome of tariff reform and other industrial problems is a series of technical colleges, of which the University of Birmingham is a striking example. As in Germany, over and above the work of actual instruction stands the five-year old National Physical Laboratory. In France the Conservatory of Arts and Crafts has been remodelled with the same end in view, that is with the purpose of combining industrial research and standardizing. We mention England and France merely to show that, like Germany and the United States, they, too, are alive to the importance of a central industrial institute. (8)

In short, the most progressive Governments of the world, whether Federal or not, have been compelled actively to aid national industrial development.

We gladly recognize that, in a certain sense, this Dominion has already extended aid in various ways to industrial education. It has:

(a) Established experimental farms, to which forestry and other departments have been added.

(b) Provided for general engineering instructions in the Kingston Military College.

(c) Established marine biological research stations in Georgian Bay and at Gaspé, and at Kingston a school of navigation.

(d) Given financial aid to Industrial Exhibitions, Royal Society of Canada, Art Schools, through the Royal Canadian Academy of Art, to a National Art Gallery, and to the Canadian Mining Institute.

(e) Established what may be called an incipient Bureau of Standards, having charge also of adulteration of food-stuffs.

(f) Provided for special lectures on the Metric System by a University professor; also for special experiments in connection with electric smelting, which may alone prove of untold value to this country.

(g) Provided for the education of Indians as well as for education in the Territories.

(h) Made some provision for a National Museum.

(i) Through the Intercolonial Railway it pays \$2,500 yearly to the Railway Department of McGill University.

Thus in various ways the Dominion Government is already evincing direct interest in our educational problems. The petition which we have the honor of submitting to you merely asks that on behalf of trade and commerce an attempt be made to come to some conclusion as to ways and means by which Canadians may secure requisite industrial education. As pointed out, it is endorsed by sentiment at home and supported by precedent abroad. Technical education, indeed, would seem to be an essential part of a scientific tariff policy.

Wherefore your petitioners pray that Your Excellency, in Council, may be pleased to accede to the request for the early appointment of a commission on technical education.

As in duty bound your petitioners will ever pray.

S. M. Wickett,

Chairman, Technical Education Committee.

C. C. Ballantyne,

President, Canadian Manufacturers' Association.

J. F. M. Stewart,

Secretary, Canadian Manufacturers' Association.

APPENDIX.

(1)—The communications from the Manitoba and British Columbia Branches read as follows:—

Resolution on Technical Education from Manitoba Branch, Canadian Manufacturers' Association.

"WHEREAS Western Canada, which is now attracting great numbers of emigrants to engage in agricultural pursuits, has within itself wonderful possibilities for industrial development and will have within a short time an enormous consuming population within easy reach of its cities;

"AND WHEREAS, there is every reason to believe that there will spring up in Western Canada manufacturing centres to compare with Chicago, St. Paul, Minneapolis, and other Western United States cities, which will require technically trained workmen;

"RESOLVED, that the Manitoba Branch of the Canadian Manufacturers' Association cordially support, as being in the best interests of and closely identified with the trade and commerce of the Dominion, the resolution passed by the Canadian Manufacturers' Association requesting the Government to appoint a commission to report on the best method for establishing a comprehensive national system of technical education, to train Canadians to keep pace with the rapid strides in our industrial development."

Communication on Technical Education from British Columbia Branch, Canadian Manufacturers' Association.

"As we understand that it is the intention of the Technical Education Committee of the Canadian Manufacturers' Association to personally present a report dealing with this most important subject to the Govern-

ment at Ottawa in the near future, I am instructed to write you that this Branch of the Association desires to place itself on record as being entirely in sympathy with the effort which is being made to advance the cause of Technical Education.

"I may say the question was one of the chief subjects of discussion at our last meeting, and a resolution was adopted that this Branch of the Canadian Manufacturers' Association assist in every way to obtain the desired end. If it is possible we will send a delegate to accompany the deputation to Ottawa, but owing to the time taken to make the journey we may not be able to get any one to go, much as we would like to be present. It is a subject which appeals to all the manufacturers here, especially to those engaged in lumbering, fishing and mining industries, and we would ask that you strongly urge upon the Dominion Government the necessity of appointing a commission to enquire into the needs of our country, which in this respect are very great indeed."

(2)—Resolution passed at Labor Convention at Toronto, September, 1905:—

"WHEREAS, the Dominion and Provincial Governments of Canada, lack greatly in schools for technical education, and are very much behind Germany and France in this respect, and in addition, the United States, which is our closest and keenest competitor in trade matters;

"BE IT RESOLVED, that the incoming executive be instructed to appeal to the Federal and Provincial Governments to enact such legislation, and make such appropriations as will permit the mechanic and artisan of Canada the privilege of education on lines of electric and civil engineering, chemistry, wood-carving, modeling, etc. In spite of the fact that the Dominion Government in the past has said that, according to the British North America Act, all education is relegated to the Provincial Governments, this matter is one of national import, and could be taken up under the Department of Trade and Commerce, and be well within their scope."

(3)—Excerpts from letters from presidents of our leading universities endorsing the petition:—

Laval.

"Le projet sur lequel vous voulez bien attirer mon attention est des plus importants. Il intéresse grandement L'Université dont je suis le Chancelier et elle est prête à vous aider à le réaliser. . . . Je souhaite que puisse se réaliser le projet que vous m'exposez dans votre lettre et je vous prie de me croire.

Votre tout dévoué,

(Sgd.) . . . L. N. Arch. de Quebec."

McGill.

"In acknowledging your favor of the 7th, I beg to say that I have previously been in communication with the former secretary of your Association in regard to the matter in which you ask for my opinion. If your Association is prepared to admit Government control over such a system of technical education as you may wish to see instituted, I am sure you are taking the best possible means in seeking to identify the movement with the Department of Trade and Commerce at Ottawa.

"It seems to me, moreover, that the less settled portions of the Dominion would have an opportunity of benefiting by what is being done elsewhere, I mean in such centres as Montreal and Toronto, if some central agency were called into existence by which their efforts could be stimulated.

"The university would, of course, always gladly co-operate so far as might be possible, with any agency whatever, that has for its aim and object the promotion of so important a branch.

Yours faithfully,

(Sgd.) W. Peterson,
Principal."

Toronto.

"I understand that the Canadian Manufacturers' Association is about to memorialize the Dominion Government requesting that a commission be appointed to enquire and report on the question of Industrial Education for Canada, including the question of federal museums.

"In view of the importance of industrial education in the development of the enormous resources of the Dominion of Canada, and in view also of what has been done by other progressive countries for the promotion of industrial training, the establishment of industrial museums, etc., I consider it highly desirable that a comprehensive enquiry, such as is proposed, should be undertaken, and I have much pleasure in giving the memorial of the Manufacturers' Association my hearty endorsement. Such an enquiry cannot fail to elicit a mass of valuable information regarding the industrial circumstances and necessities of our own country as a whole, and it will at the same time show clearly by comparison with other countries what steps should be taken to put the Dominion of Canada on some sort of basis of equality with other competing countries.

Yours faithfully,

(Sgd.) J. Loudon,
President."

Queen's.

"The subject is one which requires careful consideration. . . . Meanwhile would like to express my approval of the course proposed in the printed extract enclosed in your letter, to the effect that the Dominion Government should appoint a commission to deal with the subject, as one seriously affecting our manufacturing interests.

Believe me, yours faithfully,

(Sgd.) Daniel M. Gordon,
President."

Dalhousie.

"One thing we may all be certain of unless this work is undertaken by some one Canada must be content to drop behind in the industrial race. We are doing all we can down here to impress this great truth upon the people and will be happy to co-operate with you in any way we can.

Yours sincerely,

(Sgd.) John Forrest,
President."

(4)—The Swiss Federal Government's grants to Industrial and Technical Schools in 1887 were 220,344 fr. as against 618,085 fr. from the cantons and municipalities. The Federal Government also endows certain travelling lectureships.

(5)—The Bureau of Education at Washington was established for the purpose of:—

(1)—“Collecting such statistics of facts as shall show the condition and progress of education in the several states and territories; and

(2)—“Diffusing such information respecting the organization and management of school systems and methods of teaching as shall aid the people of the United States in the establishment and maintenance of efficient school systems, and otherwise promote the cause of education.”

(6)—The money was to be made from sales of public lands, and was to be applied “only to instruction in agricultural and mechanical arts, the English language, and the various branches of mathematical, physical, natural and economic science, with special reference to their application to the industries of life.”

(7)—According to the Bureau of Education Report there are forty-nine State colleges of agriculture and mechanic arts, besides sixteen colored colleges endowed by Congress. These colleges are devoting more and more attention to industrial education. Forty-four out of the forty-nine State colleges provide courses in mechanical engineering, thirty-eight in electrical engineering, thirty-seven in civil engineering, twenty-one in mining engineering, six in architecture, four each in metallurgical, railway and textile engineering, three in ceramics, etc. In 1890, 83.9 per cent. of the college expenditures were for industrial arts and sciences. Federal grants to June, 1904, totalled \$31,157,588, \$15,202,000 being in money. According to a report prepared for the St. Louis Exposition, the revenues of higher educational institutes in the United States were derived from the following sources:—

Class of Institution.	Fees.	Endowments.	State or Municipality.	Federal Government.	Other sources.
	%	%	%	%	%
All higher educational institutes	38	24	19	8.7	9.3
Universities and colleges (for men and women)	37	39	20	4	9.3
Higher colleges for women	72	17	..	...	10.8
Minor colleges for women	86	2	3	...	9
Schools of technology	12.8	12.3	26.4	40.8	7.7

(8)—In 1901 the French Government appropriated for the Paris Museum of Natural History 967,500 fr.; for the Conservatoire des Arts et Metiers 500,000 fr.; for L'Ecole Central des Arts et Manufactures 700,000 fr.

(9)—The appropriation for the Georgian Bay Marine Station is \$1,500; for the Gaspé station, \$2,000. In 1899 the Gaspé station was voted \$7,000, mostly for equipment. On the School of Navigation and Naval Training Ship somewhat over \$6,000 was spent in 1904.

MOTOR CARS ON RAILWAYS.

The first railway motor car to be constructed and used in Canada made her trial trip recently on the Canadian Pacific Railway line from Montreal to Vaudreuil. Canadian Pacific officials believe that motor cars constructed on the principle of the one already built will solve the difficulty of suburban traffic, and within a short time this car will be placed in commission on some of the suburban routes, along with other cars constructed at the Angus shops for the same purpose. At some stages of the trial trip the car developed a speed of sixty miles an hour.

The car was constructed under the supervision of Mr. Vaughan, who modelled it according to British patterns, with modifications necessary to suit the demands of the Canadian railways. It is a regular first-class standard railway car with seating capacity for forty passengers and a smoking compartment accommodating sixteen.

Agricultural Implement Exhibit in West Africa.

An agricultural exhibition is to be held in Lagos, West Africa, in November, 1906, under the auspices of the Lagos Government, states the British Colonial Secretary. Exhibits of any simple implements or machinery suitable for the cultivation or preparation of the principal products of the colony—palm oil, palm kernels, rubber, cotton, maize, cocoa, coffee, shea butter, mahogany, etc.—are invited. As the plantations have no draught animals at present, exhibits of hand implements and machines would be most suitable. Medals and diplomas will be awarded. It is believed that the steamship companies from Liverpool and Hamburg to West Africa will quote very low rates of freight on exhibits. Canadian manufacturers making light farming implements, such as hoes, hand cultivators, rakes, etc., might find a ready means of opening up a market through this exhibition.

Machinery for Japan.

In discussing the industrial activity of Japan, Consul Henry B. Miller says that various new companies and extensions, involving a large outlay of capital, are about to be launched, and the following figures are of interest: Capital required for companies being promoted to supply water-power for electric motor-power, estimated at \$35,700,000; for new electric light and railway companies and for extension purposes, \$9,825,000, of which \$3,850,000 will be supplied from abroad; for extension of spinning mills, \$16,275,000. Municipal enterprises in many cities involve an outlay of \$12,610,000. New mining companies are also being floated. Their aggregate capital amounts to \$17,600,000, of which \$8,850,000 is to be raised by foreign loans, new railway and shipbuilding enterprises represent the sum of \$25,092,000.

The imports of machinery at Kobe amounted in 1905 to \$5,148,000, or over three times the value imported in 1904. Of all machines lathes made the highest increase, amounting to \$1,240,000. Next follow machines for metal and wood-work, spinning, and electric light plant, locomotives and electric motors. Each of these various lines showed an increase of over \$250,000 on the figures for 1904.

Imports continue to increase, and the value of machinery imported during January last amounted to \$515,800 against \$330,600 for January last year. Almost every steamer arriving in Kobe from Europe has had consignments of machinery on board.

HAMILTON AS AN INDUSTRIAL CENTRE

By JOHN T. HALL, Assessment Commissioner.

It has been for years a recognized fact that the city of Hamilton is essentially a manufacturing city. Her advantageous geographical position at the extreme western end of Lake Ontario gives her excellent shipping facilities by both rail and water, and we are under the impression that Hamilton possesses all the economic conditions required by large industrial concerns to enable them to carry on and keep in operation their plants under the most favorable conditions.

Through the medium of the Hamilton Cataract Power, Light and Traction Co. the city was one of the first in the Province to develop and transmit electricity and dispose of it to manufacturers at about one-half the price that it could be produced by steam. Their power houses are at DeCew Falls, thirty-five miles south-east of the city, and it is trans-

the Atlantic to the Pacific and extending north to the bounds of civilization, will be controlled by the Province of Ontario. Through the above movement, and aided by a recent enactment of the Dominion Government, familiarly known as the Anti-Dumping Clause, a great many American manufacturing institutions became established here; and we think we are safe in saying that there is more American capital invested in the city of Hamilton than in all of the other cities of the Province combined.

Among the many advantages which Hamilton possesses are the first-class building sites, which are to be had at a reasonable figure, a large labor market to draw from, the very best railway facilities, and an enlightened policy on the part of the municipality in offering liberal inducements and fair treatment to the manufacturers who locate



International Harvester Company's Works, Hamilton.

mitted into the city at a voltage of 22,000, and is stepped down for commercial and industrial purposes to 2,200. Over three-fourths of the factories are operated by this subtle but potent power, and to this fact is due the comments made by visitors, particularly in the summer time, that for a city with so many manufacturing plants, Hamilton, has solved and abated the smoke nuisance.

During the last few years there has been a great tidal wave of emigration from the United States into our Western Territories. Well-to-do farmers have sold their farms in the United States for large sums, and, with their families, have crossed the border, purchasing large tracts of land at a low figure, and, by reason of the fact that they are thoroughly competent and experienced agriculturists, with considerable capital, they are enabled to develop the country very rapidly. Following in the wake of this movement is the advent of the American manufacturer into Canada; and, since Ontario is essentially the manufacturing Province of the Dominion, the greater portion of this wealth comes into our Province. This movement should be nurtured and encouraged by the people of Ontario, as a very large percentage of the manufactured product that is marketed from

here. It is easy to see why the industrial growth of our city has been so rapid. Recently the writer had occasion to find out just how much outside capital had been invested in the city since the industrial boom began, and the result was most gratifying. Many of the answers received contained glowing reports from the concerns who had come here as to their success up to date and their prospects for the future.

The International Harvester Company have a tract of land of 125 acres and buildings covering 35 acres. At present they employ an average of 1,600 hands, with promise of greater development in the future. Their investment is \$6,000,000.

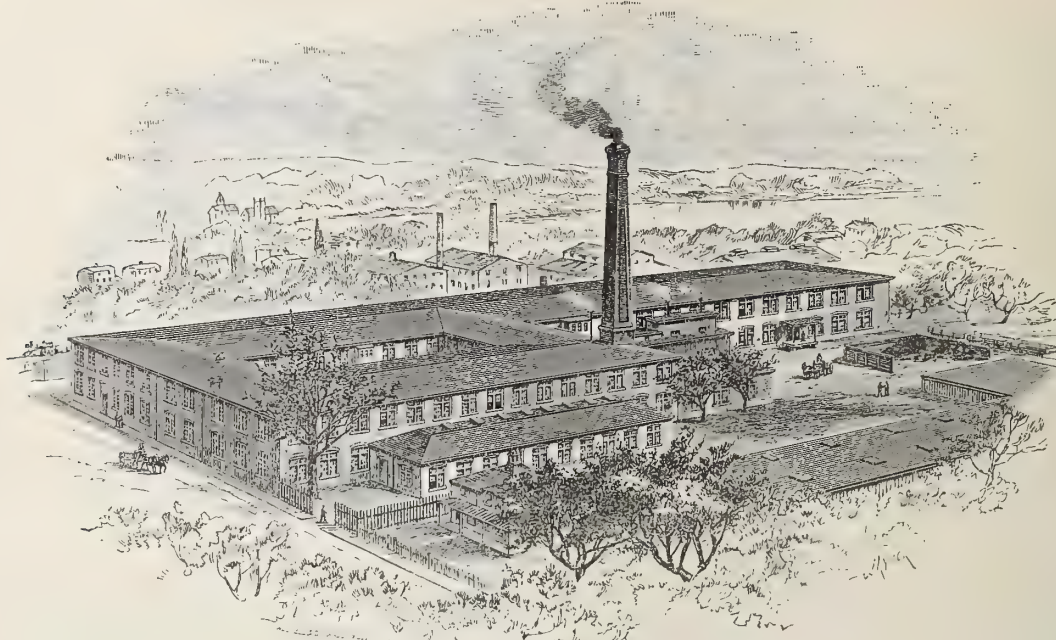
The Canadian Westinghouse Co. has a plant covering 16 acres, upon which there are erected modern, up-to-date factory buildings, not excelled in any of the American cities. Their plant represents an investment of \$5,000,000.

The Otis Elevator Co., of New York and Chicago, have a branch here, and last spring they bought out the Fensom Elevator Company, of Toronto, and moved their entire plant here, doubling their capacity. At present they employ about 170 hands, operating with a capital of \$100,000.

F. W. Bird & Co., of East Walpole, Mass., have a branch here and \$100,000 invested.

The Union Drawn Steel Co., of Beaver Falls, Pa., formed a Canadian company with a capital of \$150,000, and employ about 160 hands.

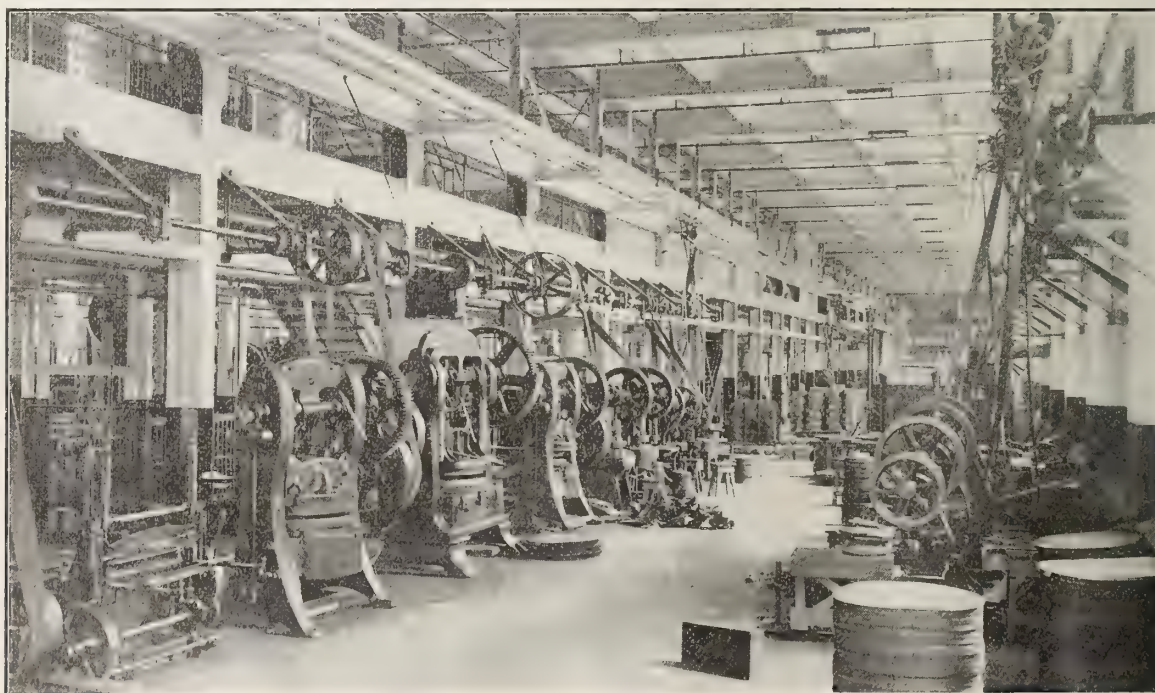
have an investment of \$30,000. The Canadian Drawn Steel Co., with a combination of American and Canadian capital, have invested \$50,000, employing 35 hands. Edward Ellsworth & Co., of Buffalo, manufacturers of Force Food, have a factory established here.



Buildings of the Canada Screw Company, Limited, Hamilton.

The Imperial Cotton Company have an investment here of \$700,000, and employ 250 hands, paying \$80,000 per year in wages. The Canadian Shovel and Tool Co., another United States concern, have \$50,000 invested, employing 60 hands. The Canadian Meter Co. have an investment of

The Canada Steel Goods Co., of Leamington and Galt, moved here, building an up-to-date factory with an investment of \$100,000, employing at present about 60 hands. The Banwell-Hoxie Wire Fence Co., from Adrian, Michigan, who have just located here, have an investment of \$50,000.



Interior View of Canadian Westinghouse Company's Plant, Hamilton.

\$50,000, and are just beginning operations. The Frost Wire Fence Co., a branch of a Cleveland establishment, have \$50,000 invested, employ 60 hands at their works on Sherman Avenue. The Allith Manufacturing Co., of Chicago,

Canadian Bearings, Limited, besides special and general machinery, will manufacture Wright's taper roller bearings.

The Smart-Turner Machine Co., Limited, J. N. Tallman

& Sons, and the Dominion Belting Co. are all examples of progressive Hamilton manufacturing establishments.

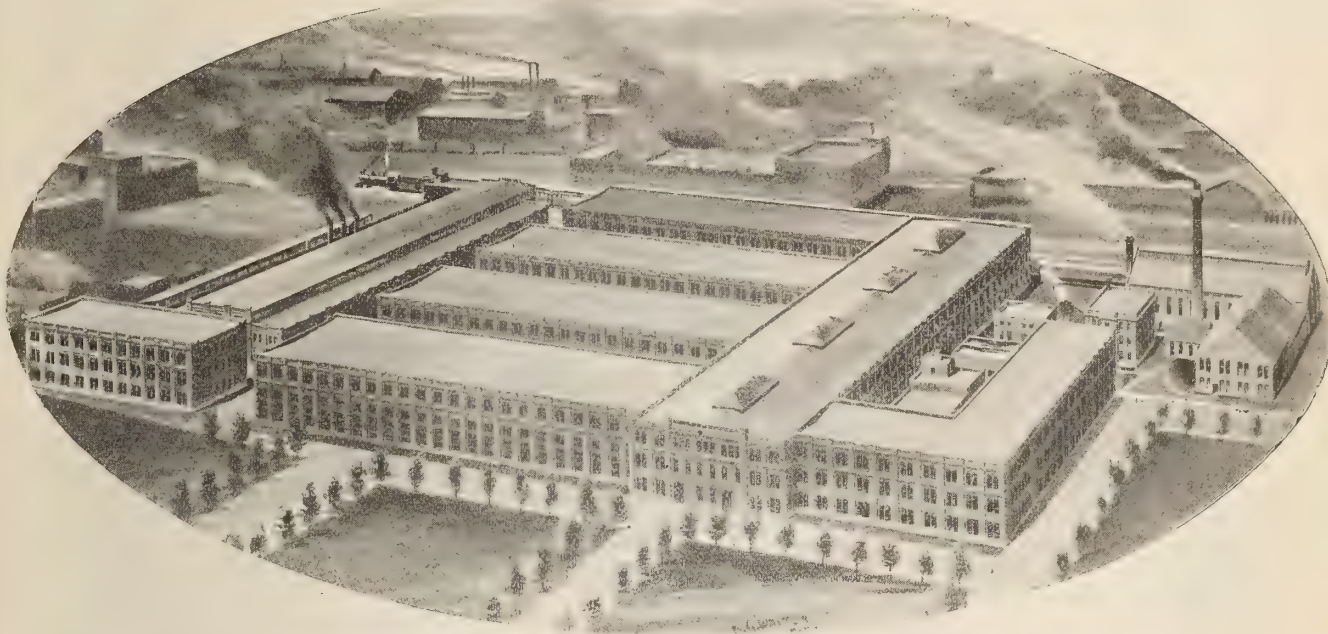
Coppley, Noyes & Randall do a national business in clothing.

The Petrie Manufacturing Co., of Guelph, came to the conclusion that Hamilton was the best location, and are now in full operation. The London Machine Tool Co. thought that Hamilton was a more desirable location, and have now in operation a first-class machine shop, with a capital of \$150,000. Even in the past Hamilton has always been a favorable spot for the investment of American capital in industrials, the present Sawyer-Massey Co., the Gurney-Tilden Co., the Meridan Britannia Co., Canada Screw Co.

erected by the Traders Bank in the city of Toronto is the work of the Hamilton Bridge Works Co., one of our most successful industrials, whose bridges span the continent from the Atlantic to the Pacific.

Crude Oil in Gas Engines.

The "American Manufacturer" describes a device whereby crude oil is enabled to furnish the source of power for gas engines. The mechanism and principle involves a horizontal rotating drum with interior spiral ribs, enclosed in an outer casing. The crude oil enters the drum at one end, and by rotation and the spiral ribs, is carried slowly



Canadian Westinghouse, Limited, Hamilton.

the Norton Manufacturing Co., Hamilton Blast Furnace Co. were originally started with American capital. In looking over these the city of Hamilton has reason to be proud of her industrials, and is justified in the hope that her prospects for the future are very bright. The above presents a very small portion of the word-picture that might be painted regarding Hamilton's manufacturing industries,



Factory of Canadian Bearings, Limited, Hamilton.

when consideration is taken of the fact that she is a city of 60,000 people, and has over 300 manufacturing establishments, large and small; and there is scarcely a manufactured product of any kind placed upon the Canadian market that has not a representative factory within her borders. The iron structural work of that magnificent building being

and uniformly through it. While the oil is passing through the drum it is exposed to sufficient heat to generate gas, which is drawn off and utilized by the engine in proportion to the amount generated, and the residue is discharged.

The heat is supplied by the exhaust of the engine, which passes between the drum and the outer shell and keeps the drum at a certain temperature, just high enough to get all the gas out of the oil. The rotating drum stirs the oil, turns it over and over, carries it in a thin sheet up on the sides of the drum, and exposes it to the heat. This is the best method of generating gas from crude oil. By it the gas is generated without an excessive amount of heat, the residue is discharged as soon as the gas is extracted, thereby obviating the necessity of the continuous cleaning heretofore necessary, while it insures a regular uniform supply of gas to the engine. Owing to the difference in cost between gasoline and crude oil, comparing as some 18 to 4 cents, and as it is stated one gallon of crude oil will develop nearly as much power as a corresponding amount of gasoline, the bringing of this California practice East deserves attention.

The Dominion Steel Car Company's works at Blue Bonnets will be enlarged by the addition of a building 600 by 150 feet, at a cost of \$60,000.

On May 31st the citizens of Chatham voted on a by-law granting aid to a beet sugar company. The Keystone Company have decided to move from Warton and Chatham has been chosen as the most favorable place for the industry.

ECONOMY IN MANUFACTURING

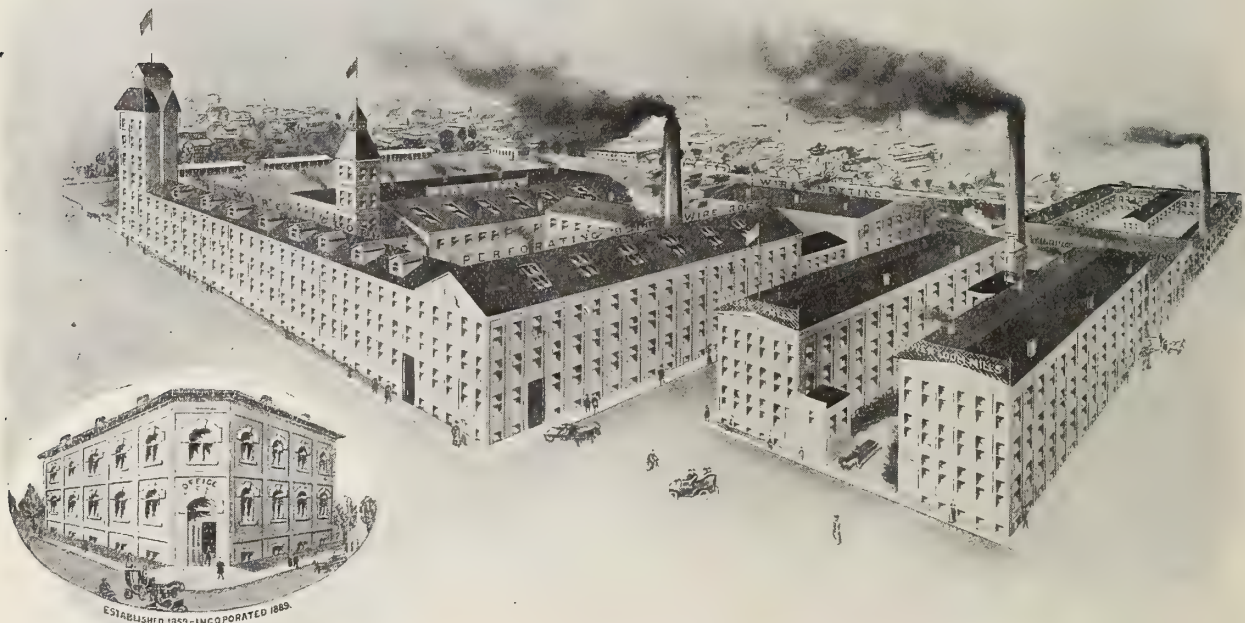
What System will do in Minimising the Cost of Production.

By H. L. C. HALL, Fellow I.A.S.

ARTICLE II.

AS it has now been clearly demonstrated that a cost system is essential to economy in manufacture, it only remains to show how such a system is possible without adding to the wages account in too marked a manner. It is possible to have a system of a certain sort without adding to the present expense even in the slightest degree, as will be shown; but if more minute details are wanted it naturally follows that there will be some additional expense incident to their collection and tabulation. It is only necessary to determine in advance what such details will be worth when collected to know how far to carry their collection.

the sums spent will be known in detail. The first item—material—has already been spoken of briefly. When goods or materials of any sort are to be purchased an order of some sort is always made out—and necessarily so. Here we will get our first record for a cost system, and without an additional scratch of the pen, for we will make out the order with as many carbon copies as may be desirable, and these copies will be our records. One of them is the order and will go to the concern which is to ship the goods. Another goes to the stock-keeper, that he may know that a replenishment of his supply is on the way. Another will, perhaps, go to the accounting department or perhaps to the receiving



Plant of B. Greening Wire Co. Limited, Hamilton.

Our purpose in establishing this cost system is two-fold. First to induce economy by the elimination of waste and second to induce economy by intensifying production. To save does not necessarily mean to cut down expenditures but rather to get a larger measure of worth for what we spend. To save it is first necessary to have a very clear idea of where the expenditures are made and for what.

In your case you are now able to say how much it costs to run your factory for a given period and to say what the production was for that period. This gives a rough sort of an estimate of cost but gives no data as to where a saving is possible. The first step then is to tabulate all expenditures for each given period and to apportion that expense among the proper items. Now we begin to accumulate facts.

Elements of Cost.

Three items enter into the cost of running your factory and three only—material, labor and expense. Our task will be to take care of the records of these three items so that

room as the needs of the case may determine. The point is that there is no added labor in doing all this, and it may be expanded to almost any desired degree. Once in store these materials will no more come out without an authorized issue than your cash will come out without your authority. This is the first absolute requirement.

It goes without saying, that the place of storage will be located with a view to preventing the re-handling of materials as far as possible. It is even wise to spend some money in making this possible. What does it cost you to handle a car-load of material from the car? You can safely figure that it costs twice as much to re-handle it. This sounds like a trite statement possibly, but think it over. I have frequently seen a car of stuff dumped off beside the track only to be gathered up and taken to its proper place a few hours later. It is a minor item but one of the items which go to make up the vast difference between economy and wastefulness—between a profit and a loss.

Somebody will have authority to issue this material and

somebody will have authority to order its issue. The order to issue we call a requisition, and this will be made in duplicate—another carbon copy. A complete system will keep a ledger account with each item in store and will credit each item with the amount issued for a given purpose or at a given time. This ledger account will constitute a perpetual inventory and will be kept on cards or loose sheets with appropriate binders. To keep such a ledger account may be considered too great an accumulation of detail in some cases, but in any event the requisition must be insisted on, for it is your record of the use to which the material has been put. The requisition for supplies is based on a production order or a shop order. When an item is to be made an order is necessary. The old method was to issue a verbal order—that is, to tell the foreman to make a given thing or a given amount. For a cost system it is necessary to issue a written order and to provide a means of tabulating these orders and their resultant data.

Cost of System Small.

Granting that a written order will be issued in any case it is again possible to get further data for our cost system without adding to the clerical work involved. A shop order is issued for each separate production lot. That is, we will issue a shop order for the repair of a machine or a tool just as we will issue an order for the making of something to sell. Of course, the two will be charged in separate places. To effect a saving of time and expense it is usual to tabulate all costs on a given shop order on the face or back of the order itself. It will not be possible to illustrate forms of shop orders here simply because no two concerns can use the same form. It is only necessary to bear in mind in getting up an order for your own use that it is to serve two purposes. It must instruct that a certain thing be done and then provide a place for a detailed record of its having been done. On the order will appear:—

- Date of issue,
- Number of order (orders will be numbered serially),
- A signature of authority,
- A sufficient description of the work to be done,
- A space for record of material used,
- A space for record of labor involved,
- Such other data as the character of the work requires.

The Foreman's Responsibility.

Such an order being made "alive" by receiving the signature of the issuing authority will go to the foreman or superintendent who is directly in charge of the shop or factory. This foreman will, personally or by deputy, issue requisitions for such materials as may be necessary for the completion of the order. It does not follow in all cases that the total amount of material used will at once be issued. In some cases a partial issue will be made from time to time as needed and in other cases the total amount will be issued and the unused part will be returned and duly credited. The foreman will also issue the necessary time cards as authority to the work—men employed on the job. It is best to issue a card for each job even though it be a small one and the workman will understand that he is to be paid only for the amount of time shown on these cards. It follows that he will see to it that there is a fresh card coming to him as soon as a card is turned in so it will be "up to" the foreman or superintendent to keep the work planned ahead so that there will be a card waiting for the man who turns one in. If there is no card waiting the workman will be given a time card of a distinctive color, which will be his voucher for getting paid for work he did not do. It scarcely need be said that the foreman will see to it that there are as few of these as may be, for each one is an emphatic comment on

his lack of executive ability and each one will mean an explanation in the "front office."

Economy in Wages.

Now comes the question of rates of pay for the workman. It is a conceded fact that economy in manufacturing lies in the greatest possible amount of production from a given amount invested in plant and from a given wage paid to the workman, but this by no means indicates that the best results are to be derived from a plan which contemplates driving the plant at the utmost limit of speed. As a matter of fact your attention should be given to the elimination of lost time and lost motion. Arrange matters so that the machines will be always running and always producing their output, and so that the workman will as near as possible spend all his time in doing that thing for which he is paid. This means that there must always be work for the machine and the man, and that the man will not be called upon to waste his time in running around after the next thing to be done. A five-dollar boy can carry time cards and orders from place to place just as well as it can be done by a twenty-dollar man—perhaps a little better. If it is possible to introduce a piece-rate scale of pay many of the difficulties in the way will be overcome. If it is possible to use the so-called premium plan it will be still better, but there are many cases where the time is not yet ripe for either of these and there are other places and many of them where it will never be possible to use either.

In any event the time card should originate from the shop order and there should be no other basis of pay than the records of these time cards. If this is followed there will be not the slightest difficulty in coming at the cost of the labor involved in getting out any given order. All this, of course, applies, to what is commonly called direct or productive labor. Labor of the other sort—non-productive labor—will be considered later.

Cost of Each Job Established.

When an order is complete, the total cost of each item shown on the order itself is entered and extended. Here we have the only item of work which was not necessary before we had a cost system of any sort, for it will be necessary for a clerk to be provided with the data as to the cost of both the material and labor involved and for him to enter the totals on a summary which will serve the purpose of a cost record of the individual order, and of a comparative statement as well. This comparative record is the basis of your future economies. A given operation or job completed to-day with a given amount of cost must be duplicated to-morrow at the same cost or less if your concern is to be successful. To do it better to-day than yesterday and better to-morrow than to-day is the aim. The tabulated record will show whether this has been done or not.

Like the shop order the tabulated statement of costs is not easy of illustration here and for the same reason. A statement must cover items which are peculiar to your line of business and these items are never the same in two separate establishments. Broadly, the tabulation will cover these items:—

- Order number,
- Shop order number,
- Date,
- Description of job covered,
- Total cost of labor,
- Total cost of material,
- Power (where this item is separately considered—as it should be),
- Overhead cost,
- Any special items peculiar to your line.

Where there are a number of men or a number of machines on the same work a tabulated statement of the production of each man or each machine is desirable. It is not possible to go to a man or to a machine tender and say to him that his production or the production of his machine is not up to the mark without some sort of data to support the statement. To say to him "you did not do as much yesterday as you did the day before" is useless, but to say "yesterday it cost seven cents per unit while the day before it cost but six" is to say something which is backed up by the records and which calls for an explanation and a change for the better on the succeeding day. If the same product is turned out day after day it will be possible to run the work through the shop in lots of a given size and to reduce the cost figures to a decimal basis for a given quantity, which quantity will be referred to as a unit, and which will in all cases be used as a basis for calculations. It is not as a basis for a selling price that these tabulations are most valuable. Indeed, in most cases the selling price is fixed without much, if any, reference to cost; but they do serve a valuable purpose in providing a history of past production which may be referred to for present or future guidance, and this is most essential in those shops doing contract work or work on which a price must be made before the article is manufactured, and perhaps before the raw materials are purchased. In such works as this it is essential that we know not only the actual cost of material and labor but also the cost of maintenance and so on. This latter item is usually referred to as "overhead cost," which is, perhaps, as good a term as another.

Apportionment of Overhead Expense.

We will suppose that we have completed the manufacture of a certain quantity of our product, that we have reduced it to units and that we know from our tabulated statements just what it has cost us, so far as the records go. There still remains the task of apportioning to each unit the proper share of the overhead expense. This is made up of all sorts of items, such as rent, insurance, interest on funded indebtedness and so on and constitutes a big item. How shall it be distributed? We cannot take it day by day and say that the sums paid on a certain day are to be added to the cost of the goods made on that day. This is manifestly impossible, for many an expenditure made to-day covers the cost of that item for a period of twelve months—as insurance for instance. It appears to the writer that as a general rule the proportionate or percentage plan is the most feasible and the most accurate, although there will be certain cases where it will not work.

Percentage calculation can only be based on experience. Take the general expense for a given period and determine its percentage relation to the most stable item of first cost. Usually this will be productive labor. If a division of your shop into departments for this purpose is possible so much the better. If your general expense is one hundred dollars and the labor item is two hundred dollars it follows that fifty per cent. must be added to prime or first cost to show total cost. This is not advanced as an absolute rule, but will be found a practical and safe method. At the conclusion of a given period it will be possible to check up the actual expenses with the sums thus added to first cost and the accuracy of the method can be tested.

The "straight line" shop is the best shop for results. By a straight line shop I mean a shop where the product makes few turns and doublings on its own track. In at one end and out at the other is the ideal method. This is not always possible, but the nearer you come to it the better. Let each man have his own place, his own work, and his own responsibilities. "What is everybody's business is no-

body's business." Interference with your foreman or superintendent is unwise, so if your foreman cannot perform his duties without your interference, get one who can. "Don't butt in."

Advantages of System.

This exposition has purposely been made as plain, simple and elementary as possible, but this you will find if you start records for yourself: That the plan will grow of its own motion, and that you will add to it from time to time as desirable features suggest themselves. It is better to start simply. The first cost of the experiment will be small and it will easily demonstrate its value as an economizer. If all this does no more than to put on paper the things hitherto carried in your memory it will have justified itself, for it will give you time to think of the executive problems which should have your undivided attention. Very possibly the first set of blanks you get up will have faults. If so throw them aside, and get up others. Printed blanks cost but little. Another thing: Print on the blanks used every possible item. It takes time to write them and time so spent is wasted if the item could be printed.

Above all things do not allow these data to be accumulated in a hap-hazard manner. Having decided what data you want insist that the plan adopted be followed in every instance. Allow no verbal production orders. A firm stand on this point at the beginning will save trouble later. If the institution of a plan of this sort is an innovation call in all concerned and explain to them the purpose of the plan. Do away with the possible thought that it means a driving of all concerned. Increased speed will be the result all through the plant, but it will be because of emulation, and not because of pressure. Every ambitious worker from the superintendent down is anxious to beat his own record. Give them a record to beat. It is a healthy sign when the men or the bosses boast of "the biggest month's production we ever turned out." Place responsibility wherever you can. Responsibility is a tonic and even though it is limited it will serve. It fosters pride and pride in the work means more work and better work. Accurately define each man's duties. This prevents little jealousies and jealousy is fatal to the co-operation which is a necessary feature of a well organized shop or factory. Make yourself accessible to each and every one of your men. This will take a little of your time, but it will pay. The men are close to the work. They see their own part of the plant through a microscope, and can give you many valuable hints if you give them a chance. The most thoroughly organized factory in the United States thinks so much of the value of such suggestions that a monthly prize is offered in each department for the best one presented. If you ask for suggestions you will get all sorts, of course. Some of them will be utterly impractical, but they must not be laughed at. To laugh at them is to discourage them and this will not do. The real purpose of all this is to put the whole plant under the magnifying glass. Many a small thing will assume a new and important aspect when you do this. The history of manufacture shows us many a respectable fortune made out of what others waste. See to it no one is getting rich from the waste of your plant. Keep the value of the waste yourself and do not let it become waste.

Accounting for Tools.

Tools are an item to be separately considered. This may seem like a small item. In some cases it is such, but in other cases it is an item of considerable magnitude. Take a machine shop for instance. The investment here for tools is no inconsiderable proportion of the whole when we consider the small tools alone. Much of the small tool equip-

ment is furnished by the shop and all of it is expensive. It is a vital economy to know that tools are not wasted, stolen, lost or broken without the responsibility therefor being placed. Many hundreds of dollars worth of tools can disappear in one way and another without being noticed and their cost can be put to a much better use. Start with an inventory of all tools on hand. Put them all in the charge of one person—preferably the store-keeper. Issue them to those entitled to them only in regular form and make it impossible for them to be lost or stolen without some one paying for them. Issue tool checks to each workman if necessary and have a check deposited for each tool and see to it that no man is paid off until all his tool checks are turned in. If tool checks are missing there are tools missing for which the man is responsible. Avoid trouble by having it understood in the beginning that there are to be no deviations from this rule. It is not that you want to sell tools at cost to your men, but you do want to preserve the tools you buy to save buying more before you have had use of the old ones. One foundry and machine shop employing less than one hundred men showed a steady loss of tools to the amount of over a hundred dollars a month before such a plan as this was adopted. It stopped at once. Take the item of files for instance. In many shops an old file goes any where most convenient. New ones are to be had for the asking, and you may be sure that they are asked for often enough. And yet old files have a market value to say nothing of having them re-cut.

BOOKS OF THE MONTH.

Canada's Possibilities.

The resources of Canada have been the subject of such frequent discussion of late that the topic is almost exhausted for a while. It is, indeed, exhausted until we get more complete information from our geological surveys, commissions of enquiry and private study. Ours is a big country and information of this kind is expensive. The late Minister of the Interior once intimated that he had planned an elaborate series of monographs that would have gone a long way to fill the bill. But the monographs issued to date are mere summaries for the gossiping journalist or the lightning book manufacturer. Some one of our members of Parliament has certainly a splendid opportunity of doing a grand service by improving our official publications.

Any ordinary book issued thus far accordingly labors under the disadvantage of having to gather together information from a multitude of sources of varying reliability. A recent volume "Canada's Resources and Possibilities with special reference to the Iron and Allied Industries and the Increase of Trade with the Mother Country," by J. Stephen Jeans (London: Offices of the British Iron Trade Association) is an instance in hand. The author was a delegate to the Chambers of Commerce Convention in Montreal, and is secretary of the British Iron Trade Association. In upwards of 300 pages he enters into a careful review of his subject and presents a book replete with statistical and other information that journalists and public men will find well to have by them. Some slight mistakes are met with e.g. calling "The Canadian Manufacturer" the official organ of the C. M. A.; confusing Mr. Cockshutt, the representative of the Toronto Board of Trade's delegate to Montreal with his namesake in the C. M. A., etc. The author's judgment as to the future of our canal system is also astray. Our canals have been successful in that they have checked railway rates, and helped to give Canada a free hand in negotiating with regard to international waterways. As to the big problems

of the relative interest of Great Britain and the United States in Canada's purchases that is a question of very great interest which the author does not attempt to explain, and which would make a capital subject for university investigation.

Canada in an English Mirror.

There is no hiding the fact that of late the Englishman's thoughts often turn to Canada. In forming a judgment on this country the Englishman has the advantage of always having before him a rigid standard of comparison by which to judge Canada. He runs, however, the risk of overlooking or undervaluing possibilities. Canada's present is great only because her future is apparently much greater, and to gauge the future is possible only after a careful study of natural and other resources—of which the Canadian himself is only gradually becoming aware.

On the other hand the average Canadian is liable to be too elated, because of the favorable contrast with the past and lack of standards for comparison in the present.

Every thoughtful citizen knows this situation full well, and in a good-natured way winks the other eye when the visitor takes bluff and bluster too seriously. However, to see one's self clearly in the mental mirror of a distinguished globe-trotting journalist is worth while.

Mr. John Foster Fraser has just issued a three hundred-page book "Canada As It Is" (Cassell & Co.), with a capital series of photographs, in which he gives a good running account of the average Canadian. His travels took him only from Quebec westward so the title of his book is perhaps too sweeping. Moreover he leaves almost out of account industrial resources and tendencies—as every fleeting traveler must or ought to do; but on the whole his judgments are sane and apt as to the people; so much so, that we would heartily recommend it, though what he says on business conditions is open to frequent criticism.

One smiles slightly to read that the chief asset in the Canadian's character is glorious enthusiasm and belief in himself and his country; that with the exception of a particular branch of agricultural implement manufacture there is not a single industry in Canada at the present time which could hold its own against fair-price-and-quality competition with the United States and Great Britain. Statements like that need qualification. They could be applied to most protectionist countries. So do the remarks that crime is on the increase; that more passengers are killed and injured per million in Canada than in any part of the world; that Lake Ontario freezes over, etc.

But we are indebted to Mr. Foster for a bright, chirpy volume that does himself and Canada no harm, and that has the merit of putting Jack Canuck's view of imperial preference in a very plain and proper light.

The wonderful expansion of the British Empire is shown by a British Blue Book recently issued. In 1861 the total area of the Empire was reported as approximately 8,500,000 square miles. No important additions were made during the next twenty years, but during the last two decades territorial acquisition has increased the total area to about 11,900,000 square miles, or nearly four times the area of the United States. This is more than one-fifth of the land surface of the globe. During the same time (1861-1901) the population of Great Britain and its colonies, dependencies and protectorates has increased from about 259,000,000 to about 397,000,080. The total commerce, import and export, of all these people amounts to about \$7,500,000,000 annually. The total annual expenditure for maintenance exceeds \$1,600,000,000 and the debts amount to more than \$6,500,000.

RAILROAD CONSTRUCTION IN WESTERN CANADA

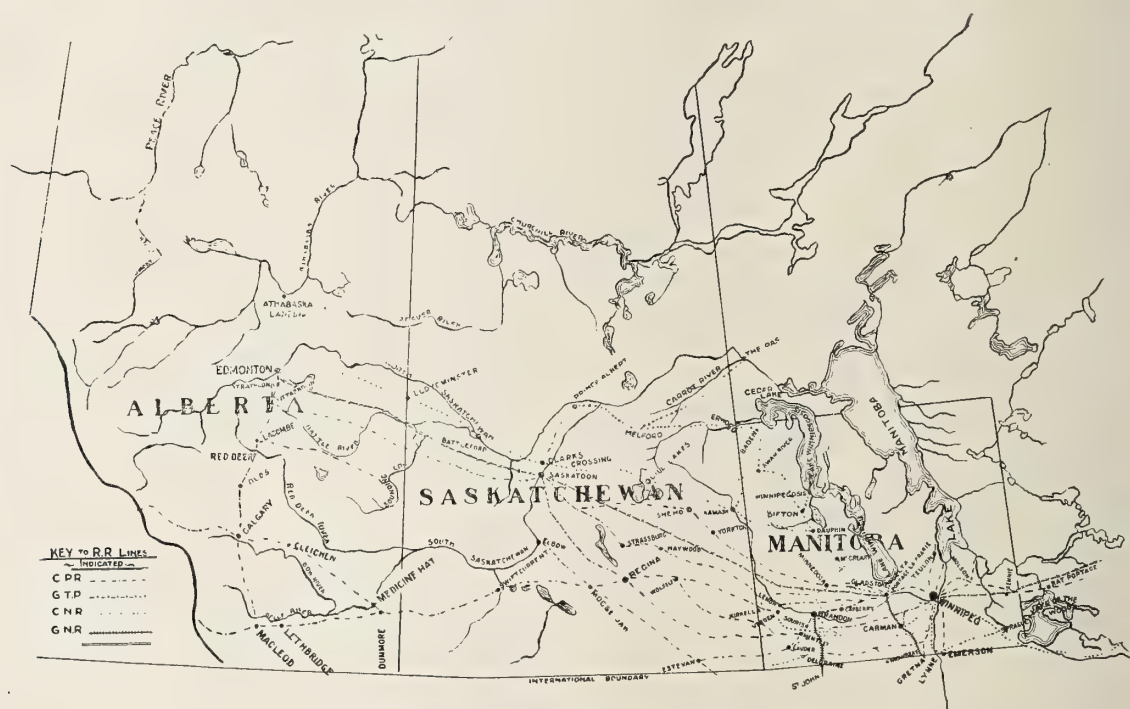
By L. H. STANTON.

RAILROADS and railroad construction furnish the leading topic in the West to-day. It is a topic which is of great interest to thousands, not only in Canada, but also in the United States and abroad. The time is not so far distant but that many can remember what the era of railroad construction in the Western States meant for that country as a whole. They can easily see what will be the effect in Western Canada.

Since the early eighties, when Manitoba was first brought to general notice as a farming country of great possibilities, there has been a gradual dawning of the realization of what these possibilities really were. At that time, a man who thought of coming West was considered "queer" by his friends and family, and even yet it is difficult to convince

shape of the decision of the Canadian people that a second transcontinental system was required. The previous activity in railroad circles became as nothing, and the two companies on the ground began a grand rush to get control of the many rich areas, hitherto untouched. It became a race, indeed. Charters, which had been on paper for a number of years, were unearthed, surveys were rushed through and active construction was begun. The Canadian Northern broke all previous construction records in getting its line through to Edmonton. The Canadian Pacific started a line in the same direction, and is building from both ends. Other lines and branches were rushed through with almost feverish activity.

Canada as a whole knows what has been done on the



Sketch Map Illustrating Railroad Development.

a resident of Ontario or the Maritime Provinces that the West has superior claims of any sort, and it is noticed that it has been the man from the United States who has taken the first advantage.

So in railroad construction. It was a line from the south, via Emerson, which first entered Manitoba. The C. P. R. main line came afterward. For about 20 years there was but little activity in railroad construction. Then the Northern Pacific interests were taken over by the Canadian Northern Company, and they and the C. P. R. started an active rivalry to get control of some of the best districts. About the same time an active immigration campaign was inaugurated, and settlers began to flock in. It soon became a keen rivalry as to which line would secure the larger percentage of these new arrivals for their own particular lines. I. meant business for them, and to get the business there was a reduction in tariffs, an improvement in the service and an expressed desire to please, which gave excellent promise for the future of the new arrivals.

A Second System.

Then still a third factor appeared on the scene in the

Grand Trunk Pacific, but Canadians probably do not realize what a large factor this line has been in the general activity. It was a dangerous rival, and one that, to be competed with, must be forestalled. The railroad which was firmly established on the ground would have an advantage, and they did not feel that any advantage could be passed over with impunity, hence the activity.

Americans Enter Field.

But beneath the surface there was still another force which was quietly working to the same end. It has been stated that the first and greatest realization of the industrial and agricultural possibilities of the Canadian West was in the United States. This is proved by the great percentage of Americans who are now taking up Canadian lands. So it was in the railroad world. Quietly and without fuss two companies applied for charters to construct railroads in Manitoba. They were the Midland, which proposed to build south to the international boundary from Portage la Prairie; and the Brandon, Saskatchewan and Hudson's Bay Company, which proposed to build from Brandon, south to the boundary. A year ago there was a rumor that these charters

were being sought by the Hill interests, but it was not generally credited, as it was thought that J. J. Hill had his hands full with his American lines. It now appears that these rumors were correct, for he has come out with a scheme which has for its completion a trunk line and series of branches, to operate in direct rivalry with the existing lines. All these lines are on the slate for construction during the coming summer.

What will be the result? They are not paper companies, merely making a play to retain their charters, but strong rivals, backed by practically unlimited capital, all entered in a race for a common goal, the getting control of a large area of rich farming country. The work must be rushed with all possible speed. They have a rival in the great immigration movement which is calling the new arrivals to the land, and men must be had. Some of the contracts let have been at fancy figures, for the contractors know that the labor situation is to be of keen interest. Business of all kinds must profit directly, because of the great amount of money which will be put into circulation through the workmen. A great area of country will be opened up for settlement, and land values will increase in consequence. It makes an alluring picture and one which may be carried into practically unlimited details and ramifications. But probably the results which will interest Canadians most is the position in which the opening up of the country to agriculture will place Canada. The time is not distant when Canada will rank as one of the great grain producing countries of the world, and as such will have a strong influence on the grain markets of the world.

Railroads in the Making.

To return to railroad construction work. At the present time there are, in Canada, 90 railroad projects in hand, representing 53 companies. On all of these definite information is not obtainable, but the chief ones have been well advertised through the columns of the daily press. It is with the Western lines that this article deals. Exclusive of the new lines of the Grand Trunk Pacific and the Great Northern, the work in hand on the C. P. R. and C. N. R. in the spring wheat belt is considerably greater than last year. As will be seen from the accompanying sketch map, the West is gridironed with a network of lines. Those given are the ones on which it is certain that construction will be begun this season, or which are now completed or nearing completion. There are many others projected, but as the locations have not been announced they have not been included.

Beginning with the Canadian Pacific Western lines, and not taking into consideration those in British Columbia, the total mileage is no small total. Their most important work consists of the double-tracking of the line between Winnipeg and Fort William, the lake port for the outlet of the wheat grown along their lines. This work includes considerable grade reduction, and the construction of a cut-off between Winnipeg and Molson, 35 miles east. This section of line is 427 miles in length. For the last four years the grade reduction work on this section has been progressing and there only remains some 50 miles on which the work is to be completed. When completed there will be a maximum of four-tenths of one per cent. for eastbound traffic, the direction of heaviest freight.

Changing the Route.

In the double-tracking the line will deviate somewhat from the present course in about a dozen places. These deviations vary from a few hundred yards to as high as six miles. By this means the haul is somewhat shortened and a better location obtained. Speed is one of the essentials of

this work, and night and day shifts are being worked where practicable. At the present time passengers may see cutting and grading in active progress along the route. There are 69 rock cuttings of various sizes to be made and a couple of tunnels to be enlarged or done away with entirely by the removal of the jutting cliff, which made them necessary in the original location. Eight steam shovels, and a number of rock and grading gangs are busily employed, many of them having worked all of last winter.

It is expected that the work will be completed within a period of three years. With the reduced grades the present freight engines will be able to handle a train of 50 loaded cars for the whole distance. Last season an unbroken daily average of 400 loaded cars East, and the same number (loaded and empty) West was maintained, though the trains averaged only 28 cars between Kenora and Eagle River. It is easy to estimate what the improvement to the line means in the effectiveness of the motive power. Through the section of the line mentioned there was an average of 36 freight trains and 4 passenger trains daily, during the whole of the rush season. With the double-track a daily average of 1,500 loads each way can be easily maintained. This means a movement of about a million and a half bushels a day, over this one line.

New Lines Projected.

West from Winnipeg the longest piece of work under consideration by the C. P. R. is the construction of the line east from Wetaskiwin, on the Calgary and Edmonton branch, to connect with the main line at Kirkella, near the Manitoba boundary. From Kirkella westward 200 miles of this line is now in operation to Strassburg, and 51 miles east from Wetaskiwin were put in operation last season. This year it is the intention to connect these two sections, via Saskatoon, the blank being some 280 miles. The contract for 200 miles has been let to Foley Bros. and Larson.

Next in order comes a line northwest from Moosejaw to the Elbow of the Saskatchewan, and thence more westerly to connect with a line which has been built 50 miles east from Lacombe, on the Calgary and Edmonton branch. The contracts for the section between Moosejaw and the Elbow, and for 100 miles east from Lacombe have been let. This line will parallel the one from Wetaskiwin, at a distance of about 50 miles.

A third line in this same territory, or rather an extension of a line is planned west from Sheho. This branch will be extended 16 miles northwest and 27 miles west to connect with Wetaskiwin—Kirkella branch. The connection will be made some 40 miles east from Saskatoon.

Among the other important branches in the West is the one from Reston, on the Arcola branch to Wolseley, Sask., on the main line. This branch is 122 miles in length, and a large portion of the grade has already been completed. It is the intention to have the whole line ready to handle a percentage of this season's crop.

Another projected line which has been on the tapis for some years past, is also on the slate with those listed for immediate construction. It is a branch running from Haywood to Weyburn, connecting the Souris branch and the Portal section.

The grading for the extension of the Teulon branch northward has been completed and track laying will commence early this spring.

On the main line it is proposed to eliminate the heavy grades between Austin and Carberry, which have been the controlling grades on this section. Surveys have been made for this work, which, if undertaken, will parallel the main line of the Grand Trunk Pacific for a considerable distance. In fact for several miles they will be only 150 feet apart.

Canadian Northern's Plans.

The Canadian Northern will be equally active in its territory. Work is now under way for a cut-off from Vassar on the main line east of Winnipeg, to Ridgeville, Man., a distance of 10 miles. Up to the present time all east-bound traffic over this system, to the lake ports, has come via Winnipeg. This cut-off will mean a more direct route for the grain raised in the Brandon and Lisgar districts, to Fort William and Port Arthur, saving some 25 miles of haul, and the possibility of congestion in the Winnipeg yards of the company.

The Province of Manitoba has agreed to guarantee the bonds of the company at the rate of \$10,000 per mile for the construction of the following branches:—From Brandon, Man., west to the Manitoba boundary, 66 miles; from Winnipeg, east across the Red River, 25 miles; from a point between Winnipeg and Oak Point across the Assiniboine River to connect with the St. Charles and Winnipeg line, 7 miles; one million dollars of bonds additional has been guaranteed for terminals at Winnipeg.

Hudson's Bay the Goal.

In the new Provinces it is proposed to construct the first 80 miles of a line to Hudson's Bay. The survey leaves the main line of the C. N. R. at Etonami, running northeasterly through The Pas on the Saskatchewan, then through Fort Churchill to the bay.

Plans have been filed for the extension of the Hartney-Virden branch westerly to Regina, 150 miles. This line was completed to Virden late last fall. The extension of this branch is west to a point on the Red Deer River, with a branch north to their main line on the North Saskatchewan. Another branch is to be carried from Regina north to Humboldt, and from there northeasterly through the Carrot River country to connect with the Prince Albert branch, where it crosses the South Saskatchewan. These latter plans have not been filed.

But it is with the Grand Trunk Pacific that Canada, as a whole, is interested to the greatest extent. The Western lines of the C. P. R. and C. N. R. are in one sense but a local issue, while the G. T. P. is a national issue. It is a transcontinental road, built by the Government, and guaranteed by the country. From the total of 3,400 miles of main line, there is a large percentage which may be characterized as Western lines. From Winnipeg west the mileage is 1,754. On this total, a large amount of construction is at present in progress. The western portion of the main line, from Winnipeg to Edmonton, is 775 miles. Between Portage la Prairie and the Touchwood Hills, some 225 miles, the Macdonald and McMillan Company, of Westbourne, have completed a large percentage of the grading. Last fall a big gang was at work where the line parallels the C. P. R., and at the present time this section is practically ready for the steel gang.

Rich Agricultural District.

Practically the whole of this section of the line runs through a rich agricultural district, with the possible exception of a few miles where it leaves the flat bed of the Red River Valley for the rolling prairie beyond. From a point 14 miles northeast of Brandon a branch has been surveyed to that city, and will be completed with the main line. From there the main line follows a more northwesterly direction to the Touchwoods, tapping a comparatively well settled district, which will be revenue-producing as soon as the necessary accommodation can be supplied. It is chiefly level prairie, and the character of the country is such that but few deflec-

tions have been necessary. It may be said that the greater portion of the G. T. P. is practically an air line, and heavy cuts and fills will be necessary to get the desired grade of four-tenths of one per cent., but it is to be a trunk line serving a vast district and a direct course with low grades and few hauls is the main consideration. It is considered cheaper to construct the permanent way now than to reconstruct at a later date when the bulk of the traffic demands the improvement.

From the Touchwood Hills west to Edmonton there is another almost direct line, with the exception of a few miles west from the crossing of the South Saskatchewan at Saskatoon. This section comprises 450 miles, all through the richest lands in the West. The contracts have been let and active preparations have been in progress for several months to get the work through with all possible speed as soon as it is possible to get on the ground. There is one short section of this line which has not yet been decided upon. That is the connecting link between Portage la Prairie and Winnipeg. For some time past negotiations have been in progress with C. N. R. for the double-tracking of their line between these points, with running rights for both companies, but a decision has not yet been arrived at. From Winnipeg east the contracts have been let to Lake Superior Junction, and from there to Port Arthur a branch line will be built to connect with the lake ports. These contracts have also been let.

Will Build Branch Lines.

The Grand Trunk Pacific Branch Lines Company has been organized to construct a series of branches to act as feeders for the trunk line. These branches, which connect with the main line, tap all of the best unserved districts available, and will add greatly to the network of lines to be built through the west. The surveys have not been completed, but the charter, as applied for, calls for the following lines:—From Winnipeg to the boundaries of Manitoba; from Brandon to the main line and to the international boundary; from the main line to Calgary, Yorkton, Regina, Prince Albert, Dawson City, and Hudson's Bay; from Calgary to the international boundary, and a number of branches throughout British Columbia. These lines mean a strong opposition to those companies now in the field, but the territory to be covered is so vast that there will not be any great need for direct conflict for some years to come.

The Hill Interests.

J. J. Hill has become the disturbing factor, which has added several complications to the situation. When the charter for the Midland of Manitoba was applied for, the names of those connected with it were all well-known Manitobans. So with the Brandon, Saskatchewan, and Hudson's Bay line, it was apparently a company of Brandon men who wished to build a line to connect with the Great Northern at St. Johns, North Dakota. Construction was pushed with the greatest activity, and there was little suspicion as to what was doing till a party of Mr. Hill's engineers made a trip over the location. Even then it was supposed that the idea was merely to get a series of branch lines to connect with his main line south of the boundary. Then came the trouble with the V. V. and E. in British Columbia, and finally the announcement that the whole plan was for a trunk line in Canadian territory, with egress at American ports. The plans for this trunk line have not yet been made public, but it is understood that they are most comprehensive.

A Bit of History.

There is an interesting bit of history in connection with the Brandon, Saskatchewan and Hudson's Bay line, which

will go a long way toward explaining the attitude of many Westerners with regard to the present railroad situation. Some few years ago Brandon was one of the most promising of the young cities of the Canadian West. It had a large tributary country, and was building up a fine wholesale and retail trade with the neighboring towns and villages. The C. P. R. was its only line of communication with the outside world, and it did not reach the tributary country to any extent. Then the C. N. R. came in with a branch line from the south, and the C. P. R. also came in from the same direction. These lines brought the Brandon merchant in direct competition with the much stronger houses in Winnipeg, with the result that Brandon suffered a loss in its trade without any material increase in its railroad facilities. It

Elimination of Grades.

One of the features of the new railroad building era which has begun in the West is the attention which is being paid to ton mile statistics. J. J. Hill, president of the Great Northern system may lay claim to being one of the greatest exponents of this class of railroad statistics. He has spent tremendous sums on grade reduction work with the idea of arriving at the most practical balance. The object of railroads on this continent is to get the greatest amount of revenue at the minimum of cost, on the tonnage hauled. Their constant and supreme effort is to get the largest amount of work out of a given mileage. They are studying all the time how to increase their average train-loads and



Country to be Tapped by New Railroads.

was a severe set-back at a critical period, and the city suffered in consequence.

As there appeared to be no chance of direct relief except in a stronger railroad competition, a company was formed in Brandon, to apply for a charter to build a line to let them out. The application was strongly opposed at Ottawa two years ago, and, in fact, was pared down to such an extent as to be practically useless. A year ago the application was renewed, and was worked through, almost along the original lines. This is the charter Mr. Hill secured, and which will become a part of his Canadian system. Needless to say Brandon merchants and business men generally expect much from it. While it has not yet been announced, it is stated that the Regina and Hudson's Bay line has also passed into the control of the Hill system. Its history is almost identical with that of the B. S. and H. B., with a certain percentage of politics thrown in. It runs from the international boundary to Regina, and from there north to the Pas mission and Fort Churchill. Several branches are also included in the charter.

the number of trains run. This may be said to apply more directly to roads which are in active competition for the grain trade.

It has been established that in handling the rush traffic of the fall season that motive power is the main consideration, and each line is working out a plan whereby the maximum of efficiency may be obtained from their motive power, without the necessity of purchasing a number of locomotives which are not necessary during the quieter season. Grades are the real governors of haulage capacity. By lowering grades and widening curves, train loads can be increased almost indefinitely. That is, a single track with low grades can do more work than a double track with high grades. In this respect railroads on the American continent have established their supremacy over the railroads of any country in the world. They can handle a greater tonnage over a given distance, with a given power, and have raised their capacity out of sight of that of any other railways in the world.

Profit by Experience.

The above facts have been established in the United States, and as the Canadian railroad building era has come at a later date, the new lines are in an excellent position to take full advantage of the experience gained. That this is being done is amply demonstrated. For the last three years the C. P. R. has been spending millions in grade reduction and curve easement throughout the West. There is hardly a mile of their main line west of Winnipeg which has not been overhauled. Humps have been removed, hollows filled and at Brandon and west to Swift Current on the Central division there are many portions of the line where an entirely new right-of-way has been constructed, which in places is a mile or more from the old line. By this means heavy grades have been eliminated and many curves cut out entirely. The same policy is being pursued east from Winnipeg. There is a possibility that in the near future a second main line will be established, and surveys have been made with the idea of finding a route which may be developed to cut out the heavy grades from Brandon east.

G. T. P. Has Good Route.

On the Grand Trunk Pacific main line this question of grade reduction will not arise. The route chosen is one of easy grades and few curves. It has involved a considerable additional cost in construction. There are many heavy cuts and fills along the route, but these are more than compensated for in the obtaining of a four-tenths grade with easy curves. Again the easy grade is all for the benefit of the heaviest haul, the east-bound grain traffic. On the feeder lines the grades are heavier.

With the hundreds of miles of railroad under contract and proposed for the next few years, there comes a feeling of assured prosperity. In the past, settlement has been retarded through the absence of ready money in the new districts, but this assures a large supply. Many a farmer along the lines of the C. P. R. owes his start in life to the money earned on construction work during that portion of the season when he would have been idle otherwise. That this feeling of confidence is shared by capital, as well as by the farmers and merchants, is shown in the development of many of the towns along the new lines of railroad. At one town on the main line of the C. N. R. the first two buildings constructed were the quarters for two rival banks which were making a bid for the business of the new district being opened up. This has been duplicated in many other quarters.

Rapid Construction.

As a concrete example of what has been done, the work accomplished by the C. N. R. last season may be quoted. In March 1905 work was commenced at Humboldt on their main line, and by November of the same year they had completed and turned over to the operating department the whole of the section to Edmonton, 400 miles, establishing a record for rapid railroad construction. On the line were four crossings of the Saskatchewan, each an engineering feat in itself, but the bridges were completed, though on some of them the work was only of a temporary character, to be replaced at a later date with the permanent steel structures. Track laying speed averaged 2.25 miles per week for the season, with a record day of 3.7 miles. A detailed description of the bridge construction work would also show a similar excellent record.

CANADIAN ROUTE QUICKER.

An interesting point in the development of trade through Canadian ports was reached during May when mail delivery by the St. Lawrence route was made much quicker than via New York. The Allan liner "Virginian" was the vessel to do the trick. The "Baltic," bound for an American port, sailed on April 25th, taking her mail on board at Queens-town on April 26th. The "Virginian" sailed from Liverpool on April 26th, and took her mail on board at Moville on the 27th. The Allan turbiner reached Rimouski at 6 a.m. on Friday, May 4th, and at 10 o'clock p.m. of the same day the mails were landed in Montreal via the Intercolonial. The mails carried by the "Baltic" by the American route did not reach Montreal until Saturday morning, May 5th. Thus the mail by the Canadian route contain a day's later news and arrived several hours earlier than those by the American.

Adopts Protective Policy.

A report from the United States commercial agent at Yokohama shows that the Japanese are recognizing the importance of industries. In discussing that country's trade regulations he says:

"The most important problem of Japan's future lies in the development of her fiscal system. Her growth along commercial and industrial lines, as is evidenced by the proposed new tariff, indicates the question is demanding the serious consideration of her statesmen. Japan has entered upon a protective policy, following the United States, and is shaping her course accordingly. She is preparing herself to meet the requirements of the Oriental market and at the same time protecting her industries. Protection is the watchword of the Japanese, and in every line of commerce and industrial expansion the dominant idea of the Government and the people is to assist in every practical way the development of infant industries and the protection of the old ones.

"By way of illustration, take a few of the articles which are materially affected by the proposed tariff for consideration in connection with the idea of protection. Paraffin is entered free. This is to foster the manufacture of candles and matches for the China trade. On the other hand, candles are advanced in duty. Alcohol is raised to a prohibitory rate, while molasses, with which the Japanese manufacture alcohol, is materially reduced. Leather is also materially advanced in order to protect the new industry of manufacturing, which promises much for Japan in the near future. Cotton goods are raised materially in order to protect the rapidly increasing spinning industry. These are but a few of the examples which tend to prove the protective policy of the Japanese. To this list might well be added the material advance in all kinds of comestibles used by foreigners in Japan, which will raise the cost of living to a considerable amount.

"While Japan is admitting free the raw material in many cases, her scientists are daily experimenting with a view to produce this raw material. The fields of experimentation will be Korea and the leased territory of Manchuria, with such parts of China as are accessible. If these new fields can be made to produce, Japan with her superior merchant marine and other facilities will see to it that she offers the best market for the raw material. Japan has well-defined plans in this respect, and hopes by their solution not only to make herself independent, but to control the commercial destinies of Asia."

CANADIAN BOARDS OF TRADE

Commission Governed Cities.

AT the annual meeting of the London Board of Trade Mr. Arthur White, of the George White & Sons Co., Limited, was re-elected president for the ensuing year. Some interesting questions were discussed in the president's address. Mr. White advocated a radical change in the present system of municipal government. He held that the business of the city should be conducted by a commission. That is, all expenditures should be controlled by the one body. Under present conditions the Board of Education asked for a certain sum, the Library Board for another, the Hospital Board for another. Yet the City Council had no control over these expenditures. Mr. White believed that the one commission, consisting possibly of the mayor and three or four aldermen, should manage all civic business.

As a development of this same theory he thought that one engineer should be over all departments into which this class of work entered. In this way the utmost economy would be procured.

These were matters which Mr. White promised to bring before the board during the next year. Other questions discussed by Mr. White were the possibilities of power from Niagara and freight rates.

The London Board is in a prosperous condition with a growing membership. It is hoped that the number of members will be doubled during the coming year.

Quebec.

Transportation matters are of the utmost importance to Quebec just now, and the application of the Quebec Transport Company for the assistance of the Board of Trade in securing some of the business which is now done through United States ports, aroused considerable discussion at the regular monthly meeting. The company is negotiating with the various railroads terminating in Quebec to make through connections with the Grand Trunk and other railroads operating Western lines, so that cargoes may be obtained for steamers loadin from this port.

Upon motion of Mr. G. A. Vandry, seconded by Mr. Picard, it was decided that letters be forwarded to the general managers of various railways requesting that import and export tariffs be made up which will enable a share of the freight to be sent via this port which now goes to American ports and that such tariffs shall at no time be higher than the minimum rates charged on such classes of traffic through any of the above ports and should any of the railroads discriminate against the port of Quebec the matter will be referred to the Railway Commission for adjustment.

The board banqueted Sir Thos. Shaughnessy, on May 19th, to celebrate the decision of the C. P. R. to make the port of Quebec its summer terminus for its new fast steamers.

Kingston.

On May 5th the business and commercial men of Kingston held a meeting to re-organize the Board of Trade. The attendance was large and representative of every element of the city's activities. Mr. W. T. Minnes was elected president; Mr. E. T. Steacy, 1st vice-president; and Mr. W. H. Richardson, 2nd vice-president.

On taking the chair, Mr. Minnes introduced the subject of inducing the Grand Trunk to bring its main line through Kingston. He pointed out the unsatisfactory nature of the

present system and felt that, if strong influence were brought to bear, the railway company would make the change.

Most of the time of the meeting was devoted to outlining plans for future work. Several speakers strongly advocated appointing a good secretary and opening a suitable office. A committee was named to draw up a constitution.

The importance of Kingston as a point of trans-shipment was dwelt upon and the subject of lake marine will, no doubt, be carefully investigated by the board.

Western Canada.

The Associated Boards of Trade of Western Canada will hold their annual convention in Edmonton on June 13th and 14th. This will be the third time that delegates from these bodies have come together to discuss matters of special interest to the West. Mr. F. T. Fisher of the Edmonton Board has issued a circular letter outlining the procedure, and it is expected that some valuable work will be done.

The Prince Albert Board of Trade is taking energetic action on questions of interest to the town. Early in the session a delegation was sent to Ottawa to urge governmental action in the matter of a bridge across the North Saskatchewan River. The survey of northern lands and other railway matters were brought up by the delegation. They brought back a hopeful reply.

Stratford.

Great activity has characterized the Stratford Board of Trade during the past year and the annual meeting held during the month brought out many suggestions for civic improvement during the coming twelve months. The relationship of a market to the welfare of the city was discussed by Ald. Dingman, who advocated covering the present stand in and extending it in size.

Several industries have located in Stratford as a result of the vigilance of the board. Moreover it commenced the agitation for a re-union of ex-residents and has been largely instrumental in developing plans for this.

The board was one of the first organizations to realize the benefits of cheap power. The report of the council contains the following significant paragraph:—

"The interests of the manufacturers of this part of the Province have a close relation to cheap electric power and the question is one of the most vital that has come before the citizens of Stratford in its history. Should the hopes of the gentlemen who have been instrumental in collecting the mass of figures and information in regard to this question be realized an immense impetus will be given to the manufacturers of Stratford and Western Ontario. We have every hope that something will be done by the Government of Ontario to preserve the rights of the public in this respect, and it is a question which should not be lost sight of by our board during the coming year."

Winnipeg.

At the last meeting of the Winnipeg Board of Trade the following resolutions were, after discussion, passed:

First.—The endorsement of the wisdom of the establishment at The Hague of the permanent court for the pacific settlement of all international disputes that may be submitted to it.

Second.—The appointment of committees to secure the advocacy of the principles of international arbitration.

Third.—The education of general public sentiment in favor of international arbitration.

THE MANUFACTURERS OF CANADA

The Prince Albert Lumber Company has started a new mill and will cut 75,000 feet of lumber per day.

The Canadian Rubber Company, Limited, Montreal, has opened a branch in Regina, Sask.

A firm is negotiating with Stratford for the erection of a stave and barrel mill in that city.

The Imperial Oil Co. will erect a distributing warehouse at Boissevain, Man.

The Canada Furniture Co., of Walkerton, Ont., will enlarge their premises this summer.

Dissolution of partnership is announced of the Western Pipe and Boiler Covering Company, of Winnipeg.

The Canada Carriage Co., Brockville, Ont., will spend \$20,000 on a three-storey factory building this summer.

Capitalists are negotiating with Stratford in reference to the establishment of a piano factory in that city.

The plant and property of the Howe Woodworking Company, St. John, N.B., were sold to Frederick A. Peters recently.

The foundry business of the Carleton Foundry Company, Limited, was sold to H. A. McKeown at St. John's, N.B., on May 26th.

The Hawkeye Incubator Company, of Newton, Iowa, are going to open a branch plant in Canada. They manufacture the "one minute" washing machine.

A. Belanger, Montmagny, P. Q., is building an extensive addition to his factory. New office buildings and a second foundry are under construction.

The Wade Manufacturing Company have secured a location in Dundas, and will install machinery at once for the manufacture of novelties and plated ware.

By a vote of the people of Ridgetown the assessment of the R. Watt Machine Works, Limited, was fixed at \$2,000 per year for ten years, and that of J. E. Middleditch at \$1,000 per year for the same period.

The Robb Engineering Company has received an order through the Canadian Westinghouse Co., of Vancouver, for two 20 horse-power engines to be used for lighting purposes on the C. P. R. steamer "Prince Royal."

The Dominion Coal Company established a record last month by shipping 12,400 tons of coal in eight hours from their piers in Sydney and Louisburg. The activity at the opening of the season augurs well for the season's business.

The Canadian Castile Soap Company has commenced operations in Berlin in the block formerly occupied by the Berlin Robe Company. The company has secured a site near Woodside Park and proposes to erect a new factory next year.

It is reported from the town of Fort William that the Canadian Iron and Foundry Company, of Montreal, will build western shops at that place. A site has been granted them by the municipality, and they will erect a plant at a cost of \$100,000.

Representatives of a cutlery manufacturing firm in Bradford, Penna., have been in contact with the council of Petrolia, with the intention of starting a factory in that town. If satisfactory arrangements are made the factory will be running before the end of the month.

Fire destroyed the main building of the Toronto Bolt and Forging Co., Limited, on May 22nd. The loss was over \$100,000. A large quantity of new machinery was installed in the building and this was ruined. Arrangements were made at once for re-building.

The Board of Trade of Woodstock is negotiating with Mr. R. J. Cochrane, of Port Colborne, in reference to the establishment of a cold storage plant in that city. Another manufacturer is also looking into the advantages of Woodstock for the purposes of manufacturing.

The adoption of Quebec as the summer port of the new C. P. R. steamers, was celebrated in that city by a banquet to Sir Thos. Shaughnessy. In his speech Sir Thomas spoke at length of the great importance of the St. Lawrence route to Canada's prosperity.

A number of Peterborough capitalists have secured incorporation for the Rapid Tool Company, Limited. The company have bought the Canadian rights for lightning bits and augers. They expect to have a factory in running order by July 1st.

The Lorimer Automatic Telephone System, of Chicago, are going to establish a plant in Canada, and Peterborough is spoken of as the location. This company will look after the manufacturing end of the Canadian Machine Telephone Company.

The Smart-Bag Co., Limited, have bought out the business of John Dick, Limited. The company have factories in Montreal, Toronto and Winnipeg, and with a capital of \$1,000,000, are in a position to carry on the manufacture of bags to the best advantage.

A new electrolytic generator, which will have the effect of more than doubling the capacity of the electrolytic refinery of the Canadian Reduction Works, at Trail, B. C., having the capacity of 15 tons of lead daily, has been ordered from the Canadian General Electric Company's works, Toronto.

A number of Ottawa capitalists have been incorporated into the Toronto and Belleville rolling mills with a total capital stock of \$599,000, with chief place of business in Belleville. It will take over the mills, etc., of the Iron and Steel Company of Belleville, and conduct a business along similar lines.

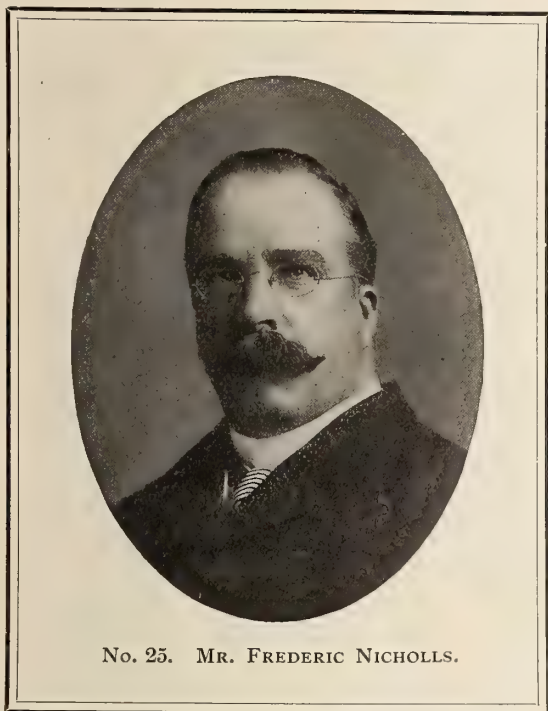
The Haidly Cement Co., of Canada, has been incorporated with a total capital stock of \$5,000 to carry on a business of manufacturing rubber and leather cements of all kinds, inks, wax dressing, etc. It is composed of United States and Montreal capitalists, and its chief place of business will be in that city.

Extensive improvements and additions are under way in the shops of the Northern Electrical Manufacturing Co., of Montreal, which is really an off-shoot of the Bell Telephone Co. When completed the entire plant will be equipped with transmission machinery of the Chapman Double Ball Bearing Co.

The American Locomotive and Machine Co., whose works are located at Longue Point, P. Q., are going to spend \$1,000,000 in enlarging their plant. The works have just been built a few years and cost over \$2,000,000. The capacity of the steel bridge department will be doubled and the locomotive department will be enlarged to turn out from three to five locomotives per week.

THE MANUFACTURERS OF CANADA.

A dominant figure in the industrial life of Canada is Frederic Nicholls, the subject of our sketch for this month. Although still in the prime of life, being less than fifty, he has identified himself with most of the big enterprises of the country. Mr. Nicholls was born in England in 1856, and came to Canada in 1874, when he was a youth of eighteen. His first few years in this country were given over largely to feeling his way and getting a firm foothold on its commercial life. He identified himself with the Canadian Manufacturers' Association at an early date, and his excellent and enthusiastic work in the cause of protection for home industries won him the secretaryship in 1882. He at that time was editor and publisher of the official publication of the Association. His first notable venture in the commercial field was as promoter of a Permanent Exhibition of Machinery. From that he took up the question of electricity as applied to lighting. Arc lights were by that time in



general use. It fell to Mr. Nicholls' lot to develop the use of incandescent lighting in Canada. The Toronto Incandescent Co. was his medium. From this developed the idea of a general electrical construction works. After some severe competition the Toronto Construction and Electrical Supply Co. became firmly established, and from this grew the Canadian General Electric Company, of which Frederic Nicholls is general manager.

This company, whose success has been so great, did not, however, absorb all Mr. Nicholls' energy. With the growth of his enterprises grew his own appreciation of the possibilities of Canada. He always had a particularly keen insight into the practical possibilities of industrial ventures. He had too, the equally valuable faculty of seeing how one industry could assist and benefit another.

So with the Canadian General Electric has grown up the Canada Foundry Company, with a great plant at Toronto Junction. The latest addition to the work of this company is locomotive construction, of which it is doing a large amount at the present time. Of this company Frederic Nicholls is general manager also.

Then he has interested himself deeply in transportation. The Canadian Shipbuilding Co., of which he is president, is playing a leading part in lake marine construction. This year it has built, or has now under construction, two boats of the best type on the lakes. He sits on the directorate of several railroad and steamship lines, and in every case he makes his personality felt.

The company which has attained the greatest prominence lately is the Electrical Development Company. The organization of this, too, rested with Mr. Nicholls. He was the first Canadian to recognize the immense possibilities of Niagara Falls for power development, and he was in the field early.

Mr. Nicholls has, through his energy, courage and ability, won great success in life. He does not court publicity, although his manifold interests keep him constantly before the public. He has, too, the good quality of being able to find time to enjoy life amidst all his business.

TRADE ENQUIRIES.

NOTE.—For further information regarding any enquiry mentioned under this heading or the names of enquirers, apply by number to the Secretary, at Toronto.

- 371 **AGENCIES.**—Canadian manufacturers expecting to exhibit at Milan, can have their exhibits arranged and cared, for by a highly recommended firm who would also act as agents for the sale of goods.
- 372 An important and reliable firm in London, England, having a branch in **New Zealand**, is prepared to undertake the representation of Canadian manufacturers, particularly of hardware lines. Catalogues and price lists are invited.
- 373 One of the largest commission merchants in **Osaka, Japan**, with branches in Kobe, Tokyo and Yokohama, and established over 30 years, is prepared to purchase or handle on commission all kinds of match materials, chemicals and drugs, sugar, metals and metal manufactures, paper, textiles, colors and dyes, glassware, paints and oils, machinery, tools, provisions, etc.
- 374 An important firm of contractors in Seattle, Washington, have opened an office in **Vancouver**, and are prepared to act as agents for Canadian makers of all kinds of building material.
- 375 **Balustrades, Hand-Rails, Newels, Etc.**—An **East Coast of England** firm desire to get into touch with Canadian manufacturers of balustrades, hand-rails, newels, and all kinds of turned goods, and request catalogues and quotations.
- 376 **Butter and General Provisions.**—A correspondent in **Kingston, Jamaica**, reports that a splendid trade can be done in butter, put up in 1, 5, 10 and 28 lb. packages, similar in quality and style of package to certain Halifax brands, and asks to be placed in touch with interested parties. References exchanged.
- 377 **Butter, Cheese, Etc.**—An **East Coast of England** firm invites correspondence from Canadian exporters of butter, cheese, bacon, hams, canned meats and fruits, in large quantities and regular shipments.
- 378 **Canadian Hay.**—A **North England** produce firm enquires for shippers of Canadian hay, c.i.f., Newcastle or Liverpool. Regular demand and good prices, correspondence invited.

- 379 **Canadian Hog Products, Etc.**—An East Coast of England firm of produce merchants desire to import Canadian hog products, butter, canned meats and cheese, and invite correspondence and negotiations.
- 380 **Canned Lobsters.**—A firm of importers in Copenhagen, Denmark, wish to get into touch with Canadian packers of canned lobsters who wish to do business in their markets.
- 381 **Cereal Wheats, Breakfast Foods and Apples.**—A Hull, England, produce firm desires to get in touch with Canadian manufacturers of cereal wheats and breakfast foods, and with exporters of Canadian apples of all classes.
- 382 **Church Furniture.**—A South African indent merchant desires to get into communication with a Canadian manufacturer of church furniture.
- 383 **Cloth (Press) for Filtering Oil.**—Quotations are asked on the above, f.o.b., Montreal or Quebec, in lots from 400 to 2,000 lbs., by a supply house in Leeds, England. References accompany the enquiry.
- 384 **Cured Hog Products, Etc.**—A North England produce firm desires to get in direct communication with packers of finest cured hog products, also shippers of eggs, cheese and butter.
- 385 **Curtain Pole Ends.**—A London, England, firm of importers and dealers wish to get into correspondence with Canadian manufacturers of curtain pole ends.
- 386 **Deal Ends.**—An East Coast of England milling firm desire to get in touch with a Canadian firm exporting large quantities of deal ends.
- 387 **Frozen Poultry, Etc.**—A London, England, firm of salesmen having had large experience in disposing of consignments of frozen poultry, rabbits, etc., is anxious to correspond with Canadian exporters with a view to the extension of their business in this direction.
- 388 **Galvanized Iron Pipes, Brass Locks, Jalousie Doors and Windows.**—Correspondence is invited from shippers of the above by a firm in Nevis, B. W. I., who also have connections in St. Kitt's and Antigua. They are not large buyers but come excellently recommended.
- 389 **Handles (Small Hardwood).**—A firm in Liverpool, England, is prepared to purchase the above in large quantities for cash.
- 390 **Hay, Cheese, Fruit, Eggs, Etc.**—A firm in the West of England would like to act as agent for Canadian exporters of hay, cheese, fruit, eggs, etc. The firm can give the highest references.
- 391 **Hickory Carriage Spokes, Etc.**—A Manchester, England, firm of carriage and wagon builders at present obtaining supplies from the United States wishes to obtain quotations on hickory carriage spokes, ash hubs with iron rim, and felloes, from Canadian manufacturers of the same.
- 392 **Hollow and Enamelware, School Furniture.**—A correspondent in Cape Town, South Africa, enjoying wide business connections in that market, is prepared to handle the above lines in which there are said to be good openings. Canadian references are supplied.
- 393 **Labels (Gum) for Tweeds.**—An old established woolen manufacturing company in the Province of Quebec is prepared to purchase the above in large quantities for cash.
- 394 **Maple Blocks.**—A London, England, manufacturer of boot trees, lasts and legging blocks, is seeking supplies from Canada of maple blocks, perfectly dry, cut to sizes which will be furnished on application.
- 395 **Oats, Flour and Bacon.**—A Finland commission merchant wishes to get into touch with oat and flour exporters, especially granular, and packers of bacon, to sell on his own account.
- 396 **Paper Shaving, (White).**—A Montreal house is in the market for the above, and would be glad to learn the addresses of Canadian producers.
- 397 **Phosphates and Fertilizer Material.**—A manufacturer in Paris, France, of chemical fertilizers, doing an extensive business with United States houses, is prepared to buy guano, blood, hoofs, ground meat and phosphates from Canadian sources.
- 398 **Piano and Organ Actions and Supplies.**—A wholesale and retail dealer in pianos in Leeds, England, established 1886, is prepared to purchase the above for cash.
- 399 **Pine Doors, Etc.**—An East Coast of England firm of building contractors desire to get in communication with Canadian manufacturers of pine doors, window frames and every description of wood moulding; also would like quotations for deal boards and maple flooring blocks.
- 400 **Pine and Oak Logs.**—A Lancashire, England, firm will welcome prices of pine and oak logs, deals and Quebec spruce, c.i.f. Manchester, from Canadian shippers of same.
- 401 **Pit Props.**—An East Coast of England timber firm, making a specialty of pit props, invite correspondence from Canadian exporters of these goods, from 4-inch to 6-inch top ends; always ready to take at least 100 standards, c.i.f. Hull or Liverpool.
- 402 **Rolled Oats.**—A London, England, importer has asked to be placed in touch with reliable millers of rolled oats in Canada; also with packers of beans and peas.
- 403 **Salmon and Lobster (Canned), Evaporated Apples.**—A wholesale commission house in Hamburg, Germany, furnishing first-class references, is prepared to buy or sell on consignment large quantities of canned salmon, canned lobsters, in 4 and 8 doz. cases, and evaporated ring apples in 50 lb. cases. Quotations are asked, c.i.f. Hamburg.
- 404 **Shelving, Hay.**—A firm of New York exporters asks for quotations, f.o.b. Montreal, on shelving, carpenters' clear, accompanied by certificate of Canadian origin; also tightly compressed hay for shipment to South Africa.
- 405 **Sisal Twine.**—A pulp company in Quebec are open to buy sisal twine from Canadian manufacturers of same.
- 406 **Square-top Chair Legs.**—A Lancashire, England, firm now obtaining supplies from the United States asks prices from Canadian manufacturers of square-top chair legs, shaped backlegs and rails. Specifications will be promptly furnished upon application to this office.
- 407 **Stoves (Heating).**—A Canadian, resident in Simla, India, wishes to equip one of the Government offices with Canadian stoves, and asks for prices and catalogues from interested shippers.
- 408 **Window Screens.**—One of the most important export houses in New York asks to be placed in touch with Canadian manufacturers of window screens.

Canada Foundry Company

LIMITED

HEAD OFFICE AND WORKS : TORONTO, ONT.



**Ornamental Iron Fences, Tellers' Cages,
Entrance Gates, Elevator Cars and Enclosures,
Door and Window Guards, Staircases,
Bank and Office Railing, Fire Escapes, Etc., Etc.**

HAND HAMMERED LEAF AND ART IRONWORK OF ALL DESCRIPTIONS IN ANY FINISH.

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Manufacturing and Importing Chemists

**Office and Works : QUEEN'S WHARF
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And Specialties for Tanning, Dyeing, and Woolen Industries

EVERYTHING THE HIGHEST QUALITY

DON'T FORGET THE NAME



The Canada Process Company, Ltd.

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OPPORTUNITIES FOR MANUFACTURERS

such as are not likely to again present themselves in the history of . . . Canada, are now open at

**EDMONTON
ALBERTA**

*The Secretary, Board of Trade, Edmonton,
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All the Essential Elements of Success are present :

Cheap Fuel ; Edmonton's coal supply is practically unlimited.

Ample Transportation Facilities ; All the great trans-continental systems meet at Edmonton, ensuring cheap rates to all quarters of the world, and giving access to all Western consuming territory.

A Practical Monopoly in an enormous territory, large enough for an empire, filled with well-to-do people and prosperous towns and villages. Eastern manufactures have to pay freight for 2,000 miles.

INDUSTRIES AT EDMONTON could put Eastern competitors out of business in Western territory. The City Council is prepared to offer inducements to approved industries, in the way of cheap electric power, light and water, and favorable taxation.

THESE INDUSTRIES ARE NEEDED :

Meat Packing Plant, Soap Works, Tannery, Foundry and Machine Shop, Biscuit Factory, and a few others.



Oldsmobile Model 'T'

This Car has demonstrated its merit. It will carry a heavier load than any other One-Cylinder Car made. With its ample seating capacity, side door entrance, and expensive finish, gives the value of a great many higher priced Touring Cars. Upon order, will give it to you with a detachable tonneau and beetle back baggage compartment, which makes it a high powered Two-Passenger Runabout.

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Price \$1,000.00 F.O.B. St. Catharines, Ont.

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MANUFACTURERS OF **OLDSMOBILES**

Olds Motor Works :—LANSING, MICH., U.S.A.

FREDERICK SAGER, Canadian Representative, St. Catharines, Ont.

ST. LAWRENCE SUPPLY CO.

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Manufacturers in Iron and Steel

**Contractors' Equipment
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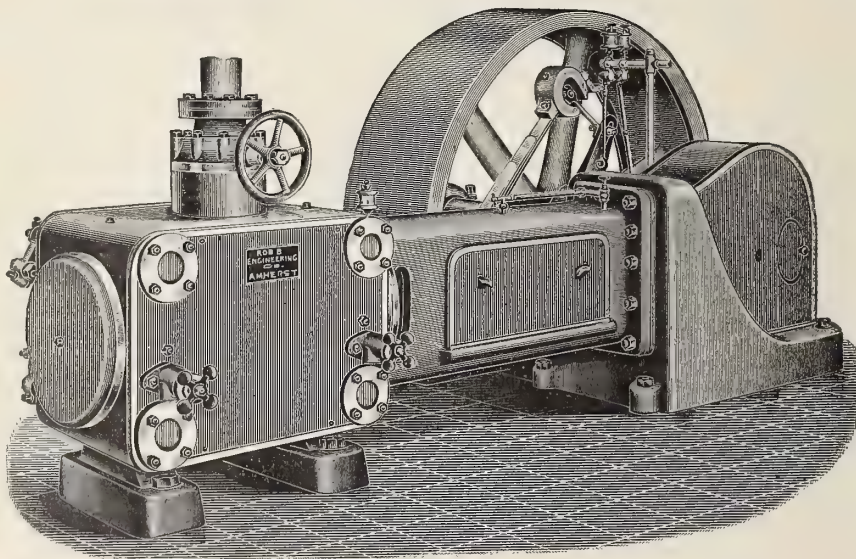
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All descriptions of special machinery manufactured to order

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ONTARIO ST., Corner Moreau, MONTREAL

OUR CORLISS ENGINES



are fitted with Robb-Armstrong Corliss Valve Gear, which has the following good points :

**Positively Driven
Encased in Oil
Runs Noiselessly
Minimum Friction
Minimum Wear**

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365 Carlton Street, WINNIPEG; J. F. Porter, Manager



CITY OF MOOSE JAW



Railway Facilities Unequalled

The most important railway centre in the Province of Saskatchewan. On the main line of the C.P.R. 398 miles west of Winnipeg, and 442 miles east of Calgary. The only city west of Winnipeg having direct connection with Chicago, St. Paul and Minneapolis by means of the Soo line, which line is now being extended to Edmonton. Moose Jaw being a divisional point of the C.P.R., over 800 miles of road are operated therefrom, and it is easily accessible to all parts of Saskatchewan, the banner province of the West.

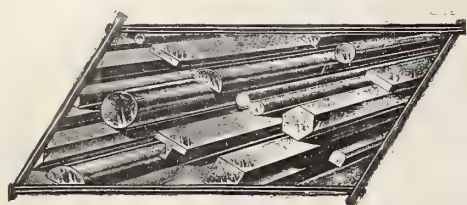
Centre of Prosperous Region

The centre of a rich agricultural district. 2,000,000 bushels of wheat were raised last year within 20 miles of Moose Jaw. Average yield per acre of wheat in district, crop 1905, as per Government Report, 27.56 ; flax 24.03 bushels.

Opportunity for Manufacturers

City owns water works, sewerage and electric light plants, and supplies motive power for factories. The rapid settlement of the province, which is now taking place by the inflow of United States farmers, is only developing the agricultural industry, manufacturing industries must follow.

To-day no better centre for investment in Western Canada can be found than Moose Jaw for an **Abattoir, a Tannery a Flax Mill, a Paper Mill,** and other industries.



DO YOU USE SHAFTING

Pump Rods, Piston Rods, Roller Bearing Rods, or Screw Steel?

Our Rounds, Squares, Flats, Hexagons, and Special Shapes are true to size and highly Polished

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HAMILTON = = = CANADA

Wire Screens for every class of material, Perforated Metal of Steel, Copper,



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WIRE MANUFACTURERS
& METAL PERFORATORS
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& MONTREAL.**

**Brass,
Zinc for
all
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Special attention
given to Miners'
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SUCCESSORS TO CLARK & DEMILL, OF GALT, ONTARIO

— **MANUFACTURERS OF HIGH GRADE WOOD-WORKING MACHINERY** —

We have just completed an extension to our present buildings, and are now in position to handle the wants of our customers more promptly than in the past.

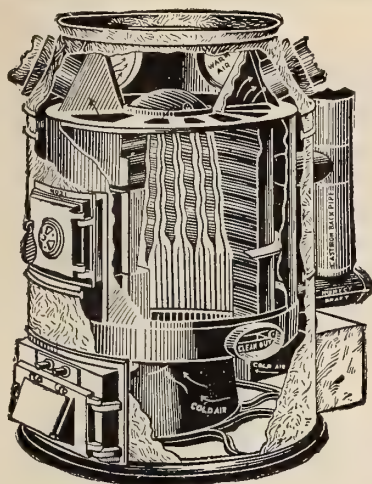
We have for reasonably prompt shipment **Moulders, Shapers, Rip Saws, Surface Planers, Band Saws, Re-Saws, Planer and Matchers, supplies of all kinds, including Belting, Knives, Saws, etc.**

Also **several second-hand Wood-Working Machines**, thoroughly repaired in our works. Guaranteed to give satisfaction.

When in the market for anything advise us, and we will be pleased to have our representative call on you. You will be under no obligation to buy from us unless you believe it to be to your interests to do so.

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"KELSEY"

IN SIX SIZES

Heating capacities from 5,000 to
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KELSEY Corrugated Warm Air GENERATORS

(PATENTED)

**HEAT MAKERS, FUEL SAVERS
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THE KELSEY is unlike any other warming and ventilating device, as to both construction and operation, consequently **not in the hot air furnace class.** **THE KELSEY SYSTEM** assures the most sanitary, satisfactory and economical warming with proper ventilation.

THE KELSEY SYSTEM, while most closely allied to **indirect** Steam or Hot Water heating, is less expensive to install and much more economical on fuel.

THE KELSEY SYSTEM is not an experiment, having been in satisfactory operation for the past sixteen years, with largely increasing sales each and every year.

30,000 PLEASED KELSEY USERS

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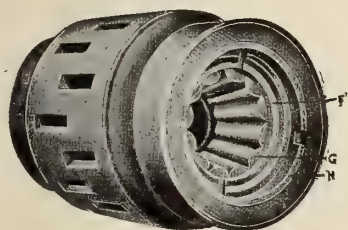
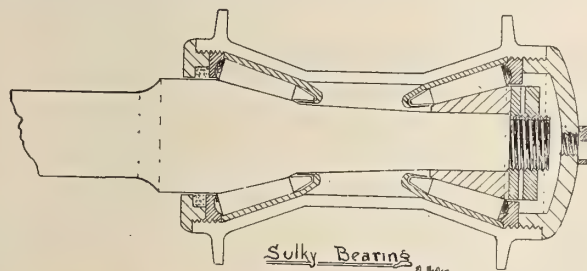
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TAPER ROLLER BEARING

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The end thrust is entirely absorbed
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A SELF ADJUSTER

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One of the chief claims to excellence over all the other roller bearings is the fact that no cage is used in this bearing. It is a fact, based on mechanical knowledge, that cages in bearings are objectionable, being one of the first parts to wear and interfere with its free utility.

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SAVES 40% TO 75% IN POWER
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MANUFACTURERS OF WOOD SCREWS, MACHINE SCREWS,
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5,000 Tons of Steel in Stock

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Any Size from 1½ inch to 24 inches, and any Length up to 70 Feet

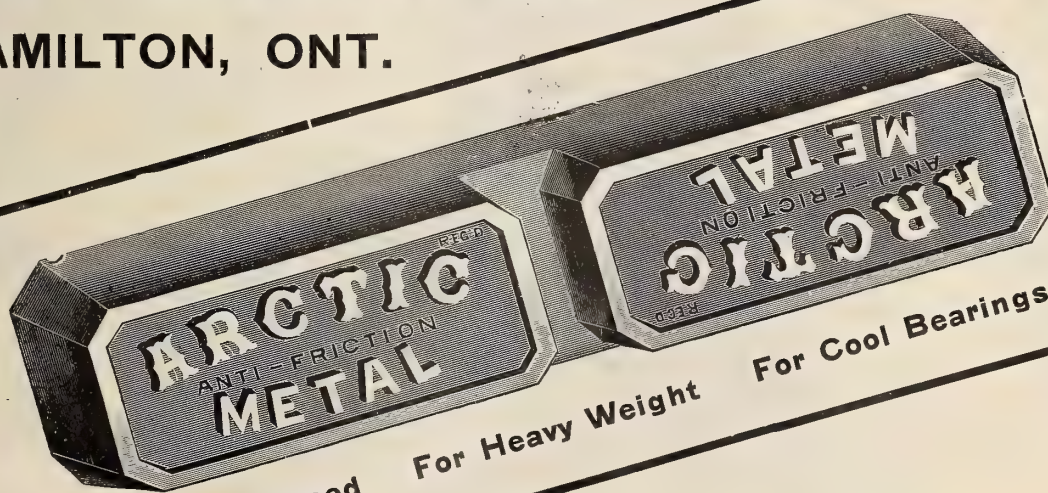
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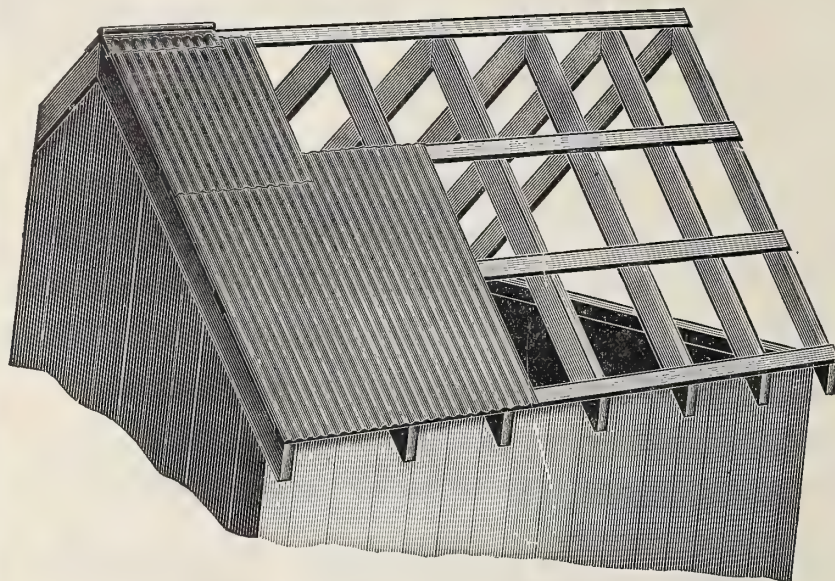
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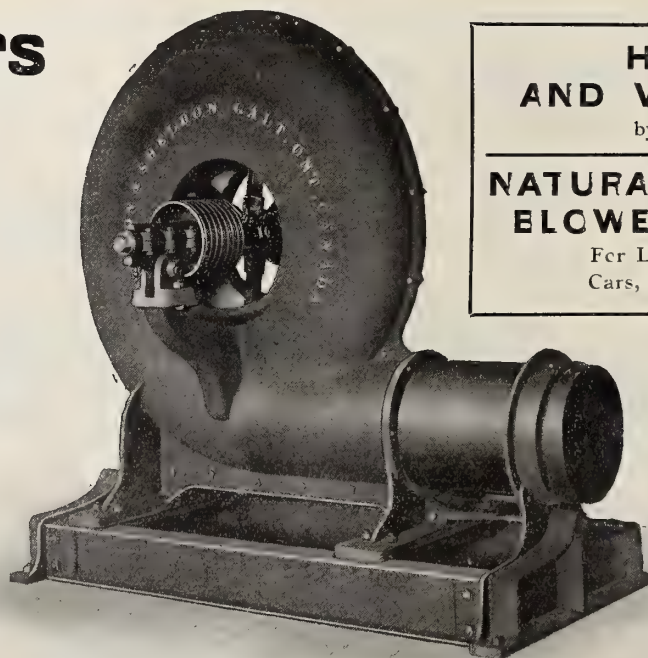
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**HEATING
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**NATURAL DRAFT AND
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For Lumber, Brick, etc.
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For Belting running in damp
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PLAIN LUBRICATOR WITH
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Walls, Roofs and Floors by Expanded Metal System.

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FOUR STRONG WOODEN JIB CRANES of the following capacity:—

1—5 Ton Crane, Hand Power, 17 ft. high with 16 ft. reach

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also **1—No. 6 and 1—No. 8 Sturtevant Fan, complete with countershaft**

The above equipment is all in first-class condition. We invite inspection.

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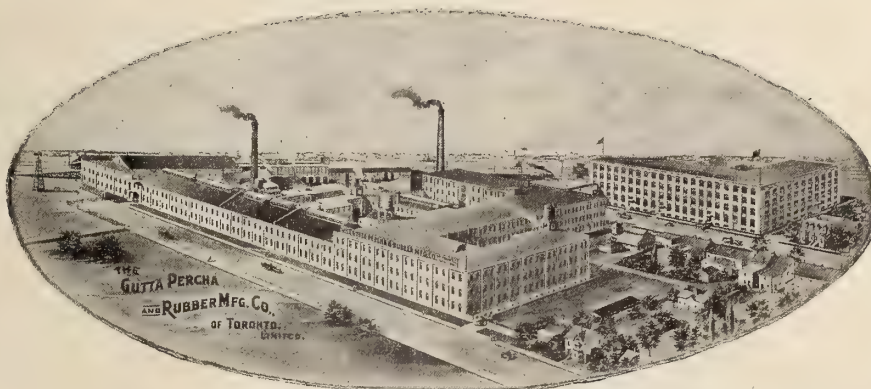
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Superior in Quality—Satisfactory in Service



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Wire Lockers

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Your Specification will have our best attention

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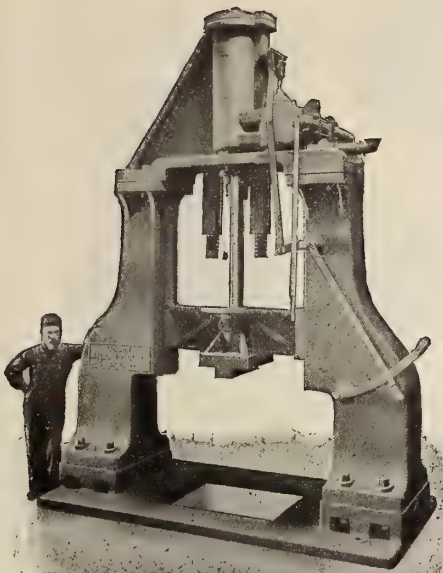
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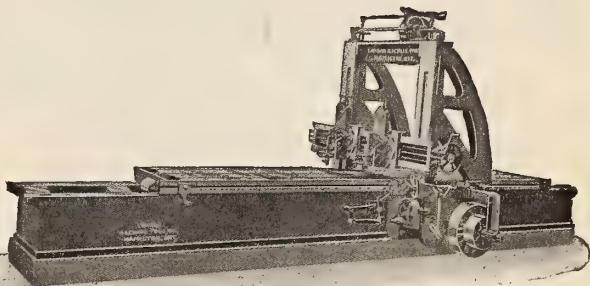
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**Montreal, Toronto, Quebec,
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**Stitched Cotton
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"Maple Leaf" is made of the best Cotton Duck, woven to our special formula.

"Maple Leaf" is the truest running belt on the market.

"Maple Leaf" is superior to either Rubber or Leather, and in many places will do work that no other belt will.

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Ask for "MAPLE LEAF" and take no other

Beware of Imitations

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Use our "MAPLE LEAF" Belt Dressing

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**TURNTABLES, ROOF TRUSSES
STEEL BUILDINGS
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Structural METAL WORK of all kinds**

BEAMS, CHANNELS, ANGLES, PLATES, ETC., IN STOCK

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COLD-DRAWN AND DIE-ROLLED STEEL
ROUNDS, SQUARES, HEXAGONS AND FLATS

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Sulphuric, Muriatic, and Nitric Acids, Glauber's Salt, Salt Cake, Mixed Acid
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ARE YOUR STEAM PIPES INSULATED?

If NOT you are BURNING MONEY

A **GOOD** Covering pays for itself in one Season, and is a revenue producer indefinitely.
The Best is the Cheapest.  **WE HAVE IT.**

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ELECTRIC LIGHT and POWER CABLES

FOR UNDERGROUND INSTALLATIONS

The Wire & Cable Company, Montreal

Grinnell Head

The Original the
Best

PURDY, MANSELL & CO. TORONTO

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INSTALL WET OR DRY
SYSTEMS OF

AUTOMATIC FIRE
EXTINGUISHING
APPARATUS . . .

"SAFEGUARD YOUR INTERESTS"

By having your factories, your store buildings
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The Value of the First Minute

In putting out a fire should never be underestimated.

BADGER'S FIRE EXTINGUISHERS

Act Instantaneously.

The moment they are inverted, a stream of
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can be directed on a fire, forty or fifty feet distant.
Positively no Mechanism to Adjust.

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ACIDS AND CHEMICALS

CHEMICALLY PURE ACIDS
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CANADIAN SALES AGENTS FOR

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AUTOMATIC

Are Invaluable to Merchants
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MORAL HAZARD

by the Insurance Companies

AND AN EQUIPMENT IN YOUR MILL OR
WAREHOUSE MEANS AN INVESTMENT THAT
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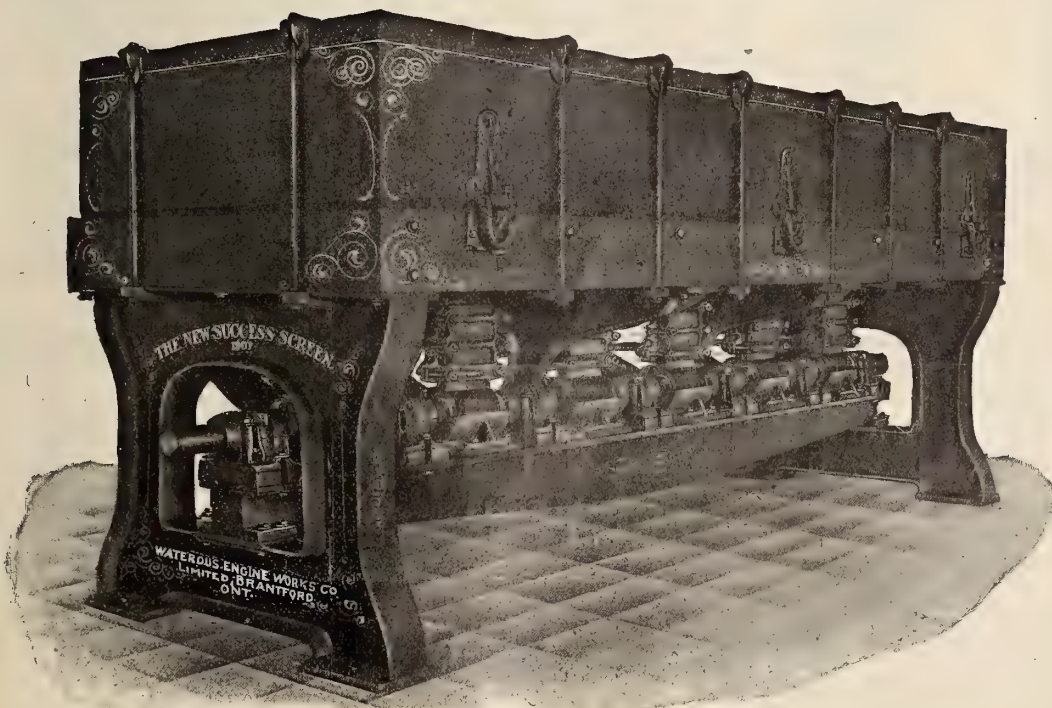


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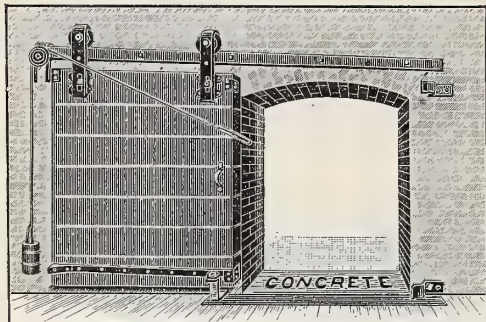
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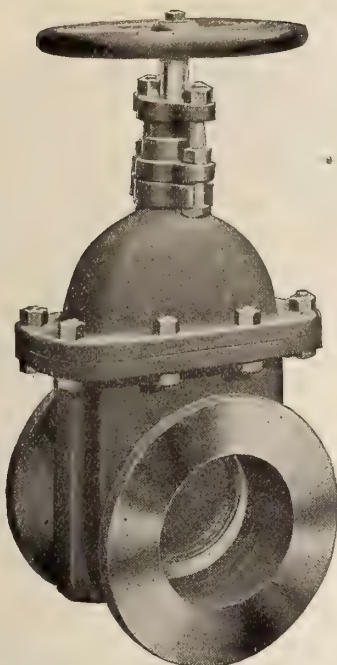
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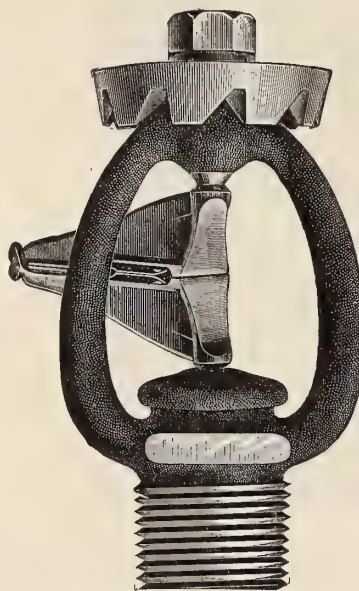
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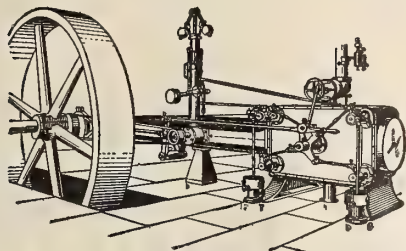
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 Manufacturers of Worsted Coatings,
 Suitings and Serges. Fancy Tweeds
 and Overcoatings in Wool only.

THE PARIS WINCEY MILLS CO.,
 PARIS, ONT.
 Manufacturers of All-Wool and Union
 Flannels, Coat Linings, Tweeds, Serges,
 etc.

CHEMICAL MACHINERY

J. A. DeCEW,
 Chemical Engineer,
 Sun Life Bldg., Montreal.

Special Patented Machines, Plants and
 Processes for Chemical Industries

Vacuum Evaporating	Refining
Vacuum Drying	Digesting
Vacuum Extracting	Recovering

Beissel's Patent "Automatic" Water
 Softening System.

TOWN OF ORILLIA

Electric Power for Sale at \$16
 per h.p. per annum.

In units from 1 h.p. to 1000 h.p. Reliable
 24-hour service. Municipality owns plant.
 Light and water correspondingly cheap.

Excellent factory sites convenient to rail-
 way, at nominal cost, to desirable industries.

Manufacturers in search of locations should
 investigate Orillia's advantages.

For further information address Secretary,
 Board of Trade, Orillia.

DO YOU WISH

To sell your goods in England?
 To buy British goods?

If you do send a post card to

COMMERCIAL INTELLIGENCE
 168 Fleet St., London, E.C.
 For specimen copy and advertising
 scheme.

Canadian National Exhibition

TORONTO, ONT.

August 27th - - 1906 - - September 10th

TO MANUFACTURERS :

Each year a great and increasing growth in the interest taken in exhibits of manufactured goods, is the best evidence of the value of such an exposition to the manufacturing industries of Canada. Our buildings devoted solely to the display of manufactured products cover over seven acres of floor space. Even this immense area has been found entirely inadequate to accommodate manufacturers who wish to avail themselves of this splendid means of bringing their manufactured products to the notice of our hundreds of thousands of visitors.

A new and commodious building known as the "Process of Manufacture Building," has been erected this year at an approximate cost of \$100,000, and covers on one floor nearly 90,000 square feet of space.

You will concede the fact that no display is so effective or makes so lasting an impression on the visitor as a practical working demonstration of the actual manufacture of an article. No building in this Exhibition attracts more attention, or interests the general public as much as our Process of Manufacture Building. Indeed, the growing interest in this form of display has made it necessary for the Exhibition to erect a building specially equipped for this purpose. To those exhibitors who have shown actual manufacturing operations in this department in the last three years, arguments as to the value of this kind of exhibit are unnecessary, and the beneficial results have been proven beyond a question.

We invite your careful consideration of the following points :

- (1) Have you in your factory a process that you can show in actual operation?
- (2) If so, don't you think that it would impress itself on our visitors sufficiently to warrant the use of it as a "clinch" to your exhibit?
- (3) We are ready and willing to call and see you personally, and to offer special inducements for this kind of exhibit.

We invite your correspondence.

C. B. McNAUGHT,
General Superintendent of Manufactures.

EXECUTIVE COUNCIL

THE MAY MEETING.

The regular monthly meeting of the Executive Council was held in the Board of Trade building on May 17th, at 2 p. m.

In the absence of the President, the Vice-President, Mr. Harry Cockshutt occupied the chair. There were also present: Messrs. Geo. Anderson, Toronto; Geo. Booth, Toronto; P. H. Burton, Toronto; J. F. Ellis, Toronto; Thos. Findley, Toronto; W. S. Fisher, St. John, N. B.; Ed. J. Freyseng, Toronto; Geo. Gillies, Toronto; S. R. Hart, Toronto; E. G. Henderson, Windsor; Robt. McLaughlin, Oshawa; J. B. Maclean, Toronto; W. K. McNaught, Toronto; J. P. Murray, Toronto; Jno. Kinsford, London; Thos. Roden, Toronto; Alex. Saunders, Goderich; J. T. Sheridan, Toronto; J. M. Sinclair, Toronto; W. B. Tindall, Toronto; R. L. Torrance, Guelph; Geo. W. Watts, Toronto; S. M. Wickett, Toronto; Dan Wilson, Collingwood.

The minutes of the April meeting were taken as read.

Communications.

Communications were received as follows:—

(1) Regrets at being unable to be present from: Messrs. C. C. Ballantyne, Montreal; Arthur W. White, London; Ed. Gurney, Toronto; W. C. Breckenridge, Hamilton; Wm. Smail, Montreal; Geo. E. Amyot, Quebec; J. J. McGill, Montreal; W. C. Phillips, Toronto.

(2) From H. C. Phillips, Secretary of the Lake Mohonk Conference, inviting the Association to send a delegate to its annual meeting, commencing May 30th. This communication was referred to the Reception Membership Committee with power to act.

(3) From Honorable Senator McMullen, calling attention to the application made by Jas. J. Hill for authority to construct branch lines into Manitoba and the West for the alleged purpose of diverting traffic to United States ports. At the suggestion of the Chairman, which was concurred in by the meeting, this communication was referred to the Railway and Transportation Committee.

(4) From Mr. A. W. Wills, Secretary-Treasurer United Factories, Limited, with reference to the existing contract between the Ontario Government and Messrs. Taylor Scott & Co., Toronto, for the employment of central prison labor. At the suggestion of the Chairman, which was concurred in by the meeting, this communication was referred to the Parliamentary Committee and the Toronto Branch.

Reports of Officers and Committees.

Mr. G. M. Murray, acting secretary, reported the absence of the President, Mr. Ballantyne, and the Secretary, Mr. Stewart, who had been delegated to represent the Association of Manufacturers at the annual meeting of the National Association of Manufacturers at New York, and made a brief announcement regarding the change of offices, advising the members present where the committee meetings would be held for the next few months.

Treasurer.

The Treasurer, Mr. Geo. Booth, presented a statement showing the condition of the Association's finances for nine months, ending April, which was received with satisfaction.

Finance Committee.

The report of the Finance Committee was presented by Mr. Jno. F. Ellis. It referred to the negotiations which had terminated in the Association vacating its old quarters in the Board of Trade building and settling in the temporary quarters in the Stair building, 123 Bay Street.

The monthly accounts of the Association were recommended for payment.

The recommendation for presentation to the annual meeting regarding an increase in membership fees held over from last month was again presented to the meeting. It read as follows:—

(1) For members employing 50 employees and under, \$10.00.
(Same as at present.)

(2) For members employing from 50 to 100 employees, \$15.00.
(Increase of \$5.00 per annum.)

(3) For members employing over 100 employees, \$25.00.
(Same as at present.)

On motion of Mr. J. F. Ellis, seconded by Mr. Geo. Booth, the report was adopted.

Reception and Membership.

In the absence of the Chairman, the report of the Reception Membership Committee was presented by the acting secretary. It recommended for acceptance eighteen applications, the names of applicants are published elsewhere in this issue.

Western Excursion.

Owing to difficulties that had arisen from time to time with the railways, which had prevented the Association from securing satisfactory rates for an excursion to Western Canada, it was recommended that the proposed trip west of Winnipeg be abandoned, and that the committee be given power to arrange an excursion to the Winnipeg Convention. Since the preparation of this report, the Secretary explained that a communication had been received from the railways of a much more favorable nature than the one upon which the committee had based its report, and the suggestion was made that this clause be referred back for further consideration.

Moved by Mr. E. G. Henderson, seconded by Mr. Robt. McLaughlin, that the report be adopted with the exception of the clause regarding the Western excursion, which should be referred back. Carried.

Railway and Transportation.

The report of the Railway and Transportation Committee was presented by the Manager of the Transportation Department. It dealt with the following matters:—

Amendment to the Railway Act.

A deputation had waited upon the Minister of Railways on April 24th, asking for amendments to the Railway Act, making provision for inter-switching facilities, and for bringing express companies under the terms of the act. The Minister had intimated that the former matter would be dealt with in the amendment to the act then before the House, but that owing to difficulties in the way no legislation dealing with express companies would be passed this session.

Supplement to Classification.

The Canada Gazette contains notice of application by the Canadian Freight Association to the Railway Commis-

sion for approval of certain increases in classification. It is proposed to make shipments of green furs, skins and hides subject to Owner's Risk of Deterioration; marble basins in boxes or barrels subject to Owner's Risk of Breakage. Churns which have heretofore been permitted to be shipped in mixed cars with agricultural implements at 6th class are to be excluded from this arrangement and mixed cars, containing churns and agricultural implements are to be rated 5th class.

The committee authorized the department to protest to the Railway Commission against the allowance of these changes as proposed by the railways. Owing to confliction of the views of those interested in mixed cars of agricultural implements and churns, it was suggested that a compromise be recommended whereby mixed cars would be charged the respective carload ratings: 5th class, churns; 6th class, implements; interested members to be advised accordingly.

Railway Traffic Forms.

Advices from Ottawa had indicated that the Special Committee was at work upon the revised forms, but that no information was available as to when they would be submitted. The Law Department of the Railway Commission had been communicated with urging that the revision be hurried.

Demurrage on Tanbark.

Owing to complaints from tanners and others interested in the shipment of tanbark, the manager had been authorized to communicate with the Board of Railway Commissioners, asking for extension of time allowance for the loading and unloading of this commodity.

On motion of Mr. J. P. Murray, seconded by Mr. S. R. Hart, the adoption of the report was carried.

Parliamentary Committee.

The report of the Parliamentary Committee was presented by the acting secretary.

Owing to certain unsatisfactory features of the census forms now being sent out by the Departments of Census and Statistics at Ottawa, the Census Commissioner will be asked to meet the Parliamentary Committee and discuss the matter before another enquiry was made.

In regard to Ontario legislation, the committee reported: (1) That one clause of the amendment to the Assessment Act introduced by Mr. W. K. McNaught on behalf of the Association had been defeated in committee, and that the other clause had been withdrawn; (2) that the Conditional Sales Act, which was opposed by the Association had been withdrawn; (3) that the Stationary Engineers' Bill, many of the clauses of which were objectionable to the Association, had passed the House, but that a number of favorable amendments had been incorporated.

In regard to the Lord's Day Act it was stated that this measure was still before the Dominion House, but that amendments would be made covering points suggested by the Association.

Moved by Mr. Thos. Roden, seconded by Mr. R. L. Torrance that the report be adopted. Carried.

Commercial Intelligence Committee.

The report of the Commercial Intelligence Committee was presented by Mr. Thos. Roden. Among the matters dealt with were the following:—

Distribution of Canadian Catalogues.

The Superintendent of Commercial Agencies of the Department of Trade and Commerce at Ottawa, had written expressing the willingness of the Department to comply

with the request of the Association and pay the cost of shipping sets of Canadian catalogues to the different commercial agents. The Secretary had been asked to arrange, if possible, with the Government not to have sets forwarded to the four agents in the British West Indies, and to send out a circular requesting the members to send in catalogues.

Metric System.

A report from Winnipeg, dated May 8th, stated that after having heard Professor McLennan's lecture on the Metric System, the business men had passed a resolution favoring the adoption in Canada of the Metric System.

The committee had decided that a letter should be addressed to the Honorable, the Minister of Inland Revenue requesting the Government to take prompt action, and, if possible, to have the lectures stopped entirely, but at any rate to have them delivered from a purely educational standpoint, instead of as at present, in advocacy of the adoption of the system.

Congress of Chambers of Commerce.

At both meetings arrangements for the delegation of the Association to this Congress had been considered.

Arguments in support of the different resolutions advanced by the Association had been prepared, and had been put into the hands of the delegates. The committee also had been pleased to add to the delegates, Mr. John Coates, of Ottawa, and Mr. T. A. Russell, Toronto.

The different resolutions of the Association will be presented to the Congress by the delegates as follows:—

Imperial Preferential Trade, Mr. Geo. E. Drummond and Mr. R. J. Younge; Special Trade Representative, Mr. H. Cockshutt and Mr. Harrison Watson; Weights, Measures and Currency, Mr. P. H. Burton and Mr. T. H. Smallman; Patents, Copyright and Insolvency, Mr. John Coates and Mr. R. J. Copeland.

The adoption of the report was moved by Mr. Roden, seconded by Mr. P. H. Burton. Objection was taken by Mr. Roden, seconded by Mr. P. H. Burton. Objection was taken by Mr. J. F. Ellis to the action of the committee in writing to the Minister of Inland Revenue requesting that Professor McLennan's lectures on the Metric System be discontinued, on the ground that the Metric System was sooner or later certain to be adopted in this country, and that it was entirely in order for those who are opposed to it to question or refute any of the arguments advanced by that gentleman. Mr. Ellis was supported by Mr. Burton, while Mr. Robt. McLaughlin, Mr. E. G. Henderson and Mr. W. B. Tindall endorsed the action of the committee. On a vote having been taken the adoption of the report was carried.

Insurance Committee.

Mr. P. H. Burton, Chairman of the Insurance Committee, briefly reported on the progress of the work of the Department.

Technical Education Committee.

The report of the Technical Education Committee was presented by the Chairman, Mr. S. M. Wickett. It stated that a deputation, consisting of Toronto, Montreal, and Quebec members had waited upon the Government on May 11th, petitioning for the appointment of a Commission to report on the best means of securing a comprehensive national system of technical education. The principal clauses of the petition were briefly outlined, and the opinion was expressed that the Government would view the matter favorably. The petition is published in full elsewhere in this issue.

Moved by Mr. Wickett, seconded by Mr. J. P. Murray, that the report be adopted. Carried.

Before calling for reports of the different branches the Chairman introduced Mr. W. S. Fisher, Vice-President of the Association for New Brunswick to the meeting, who spoke at some length on the manufacturing and transportation problems which were interesting the Eastern Provinces. Mr. Fisher referred particularly to the steady expansion of trade through Canadian ports and bespoke the assistance of the Association in having the preference restricted to goods entering Canada direct from the country of their origin.

Toronto Branch.

The report of the Toronto Branch was presented by the Chairman, Mr. W. B. Tindall. Among other matters it referred to the inadequate service at the local custom house and the annoying delays which members were constantly experiencing when they attempted to secure goods. This matter was being investigated with a view to making representations to the customs authorities at a later date.

Lemieux-Young Banquet.

The Lemieux-Young banquet held on April 19th had proved a most successful and enjoyable affair. The report also stated that the annual meeting of the Branch would be held the last week in June instead of in August as formerly.

Montreal Branch.

The Secretary read the report of the Montreal Branch, which was considered clause by clause.

The advisability of establishing a labor bureau for skilled mechanics coming from foreign countries was advocated in a letter from Mr. Geo. A. Slater. This matter was referred to the Parliamentary Committee.

A recommendation was submitted to the effect that the by-laws of the Association be amended so that the fiscal year would end on May 1st instead of August 1st for the reason that the branch annual meetings and the annual convention of the Association could then be held at a time which would likely ensure a better attendance. At the suggestion of the chairman, which was concurred in by the meeting, this recommendation was referred to the Convention Arrangements Committee.

The Branch reported that it had been informed that the new National Transcontinental Railway Bill compelling the Grand Trunk Pacific to buy goods in Canada provided the prices were the same as the prices charged outside the country, and it was thought that this restriction should apply also to the Intercolonial Railway which was importing a large portion of its supplies into Canada free, under clause 450 of the Customs Tariff. In referring this matter to the Tariff Committee, the branch recommended that steps be taken to have clause 450 of the Customs Tariff struck out and the provisions in clause 3 of the National Transcontinental Railway Bill applied also to the Intercolonial Railway.

Five applications for membership were recommended for acceptance.

The Secretary reported briefly regarding meetings of the Quebec and British Columbia branches, at which matters of local interest were considered.

Under the heading of new business the Chairman spoke of the growing scarcity of labor and suggested that some steps should be taken to provide employers with help from abroad. Mr. McLaughlin, and Mr. Watts also spoke on this question, the former emphasizing the relief which might be afforded through technical education, and suggesting

that the members of the Association should actively support the petition of the Technical Education Committee to the Dominion Government.

The meeting then adjourned.

NEW MEMBERS.

Passed by the Executive Council May 17th, 1906.

Bedford, Que.

THE BEDFORD MANUFACTURING CO.—Axes, Scythes and Harvest Tools. ✓

Lennoxville, Que.

UNION SCREEN PLATE CO., OF CANADA, LTD.—Brass and Bronze Screen Plates.

Montreal, Que.

LAURIE ENGINE AND MACHINE CO., LTD.—Engines and General Machinery.

✓ MONTREAL STREET RAILWAY CO.—Cars and Car Supplies.

G. H. RANDALL & CO.—Interior Woodwork.

THE SIMPLEX RAILWAY APPLIANCE CO., OF CANADA, LTD.—Car Trucks, Brake Beams and Roller Side Bearings.

THE WATSON, FOSTER CO., LTD.—(J. H. Gallagher, 3rd Member.).

Quebec, Que.

✓ J. C. KAINE.—Pulp and Saw Mills.

THE OYAMEL COMPANY.—Lumber.

Sherbrooke, Que.

J. L. MATHIEU CIE.—Syrup of Tar, Proprietary Articles.

GEORGE LONG.—Sashes, Doors, Blinds, Bank Fixtures.

THOMPSON & CO.—Bobbins and Textile Mill Supplies.

Toronto, Ont.

C. W. BONGARD CO., LTD.—Dry Cell Batteries, Flexible Conduits.

THE MINISTER MYLES SHOE CO., LTD.—Shoes.

✓ NEWSOME & GILBERT, LTD.—Printing and Stationery.

THE PENDRITH MACHINERY CO.—Bakers' Machinery.

PURDY, MANSELL & CO.—Fire Equipment.

TRUNK & LEATHER GOODS CO.—Leather Goods and Trunks.

Premature Publicity.

The English paper, "Commercial Intelligence," criticises some Canadian papers for thoughtlessness in publishing industrial news while the matters are still only under consideration. It remarks:—

"The average Canadian newspaper is so elated at the prospect of any new manufacturing plant being laid down that it is rather apt to cause mischief. If there is a rumour about that a firm is negotiating for a site, in it usually goes, even if the parties concerned wish to shun publicity. It need hardly be pointed out, one would think, that to reveal the name of the parties interested when it is particularly desirable that they should not be divulged, is to run the risk of spoiling everything. We are impelled to make this complaint by the fact that we know of one important British firm whose plans for a Canadian plant will have to be radically altered if not abandoned in their entirety by reason of their indiscreet disclosure by a Nova Scotian newspaper. It is by no means an isolated instance."

It will be remembered that Mr. Aemilius Jarvis made the same complaint a few weeks ago, when negotiations regarding the lake transportation companies were prematurely announced.

FOREIGN TRADE WITH CANADA.

Since the steamship line between Vancouver and New Zealand was started, there has been renewed interest in the question of trade between Canada and New Zealand. Business men on both continents are anxious to have the experiment of the direct steamship line prove successful. This is of especial importance to Canadian manufacturers from the fact that there is a big market in New Zealand for manufactured articles from this country. In return Canada imports raw material and natural products from that country.

The number of manufacturers who are taking advantage of the International Exhibition, to be held at Christchurch, N. Z., shows that Canadians are alive to the importance of that market. Already 48 have reserved space and this number will probably be increased.

In order that those who are interested in the lines of goods exported from New Zealand may appreciate the extent of our trade with New Zealand, a list of the imports into Canada from New Zealand from January 1st to October 31st, 1905, is appended.

Imports of Raw Material and Produce into the Dominion of Canada

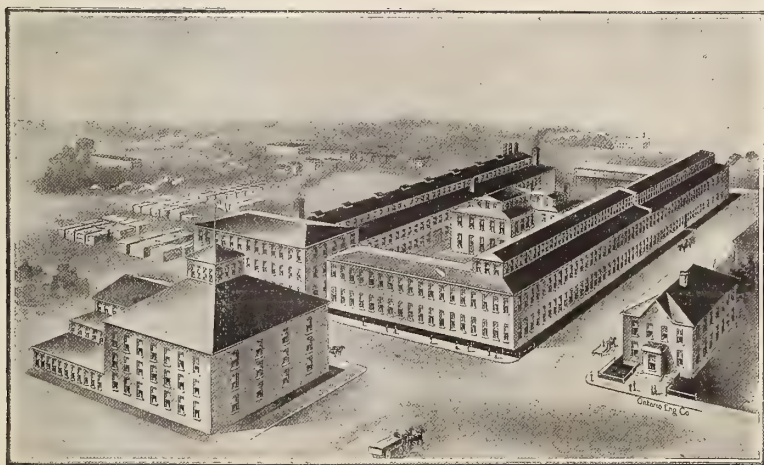
DURING THE PERIOD FROM JANUARY 1ST, TO OCTOBER 31ST, 1905.

Article.	Rate of Duty.	Amount Dutiable.	Amount Free.
		Dollars.	Dollars.
CEMENT	12½c. per 100 lbs. including packages	1,005,101	
COAL, COKE AND COAL DUST		7,062,485	10,809,177
Bituminous Slack and Round Coal	53c. per ton of 2000 lbs.		
Anthracite Coal and Dust	Free		
CORDAGE, ETC.		248,379	1,602,406
Twine and Cordage, all kinds	25 per cent.		
Binder Twine	Free		
FERTILIZERS		95,256	88,001
Compounded or manufactured	10 per cent.		
Uncompounded	Free		
FISH—ALL KINDS		565,888	
Pickled or Salted in barrels	1c. per lb.		
Smoked or boneless	1c. " "		
Preserved in Oil	30 per cent.		
Fresh or Dried Fish, imported in barrels or half-barrels	1c. per lb.		
Prepared or Preserved, including Oysters, not specially enumerated	25 per cent.		
Oysters, shelled in bulk	10c. per gal.		
Oysters, shelled in cans not over 1 pint	3c. per can		
Oysters shelled, in cans exceeding 1 quart in capacity an additional duty of 5c. for each quart or fraction of a quart	5c. per quart		
Oysters in the shell	25 per cent.		
Packages containing Oysters or other fish W.O.P.	25 per cent.		
HEMP, UNDRESSED, JUTE, ETC.	Free		1,348,104
Hemp undressed mentioned separately only July			
Aug., Sept. & Oct. \$			225,291
Jan. to Oct. Undressed Hemp is mentioned amongst Flax, Hemp and Jute... ..			122,813
			\$1,348,104
			(Probably \$400,000 Hemp)

Article.	Rate of Duty.	Amount Dutiable.	Amount Free.
FRUITS—GREEN		1,606,408	1,172,245
Bananas, Plantains, Pineapples, Pomegranates, Guavas, Mangoes, Shaddock, Wild Blue, Strawberries and Raspberries	Free		
Blackberries, Gooseberries, Raspberries, Strawberries, Cherries and Currants N.E.S. the weight of the package to be included in the weight for duty	2c. per lb.		
Oranges, Lemons and Limes in boxes of capacity not exceeding 2½ cubic feet	25c. per box		
In half-boxes, capacity not exceeding 1¼ cubic feet	13c. per ½ box		
In cases and all other packages	10c. per cubic feet holding capacity		
In bulk per 1,000	\$1 50		
FRUITS—CANNED		165,954	749
Only such as are used for medicinal purposes, not eatable ..	Free		
In air tight cans or other packages, the weight of package to be included for duty ..	2½c. per lb.		
FURS OR SKINS		1,293,975	2,945,747
Raw Skins	Free		
Dressed in any way	15 per cent.		
GREASE—ALL KINDS		32,042	257,446
Only Axle and Lubricating Greases Dutiable.			
HIDES—Including Pelts	Free		4,627,038
HOPS	6c. per lb.	137,293	
MINERAL WATER	25 per cent.	124,039	
OILS—FISH	20 per cent.	872,590	156,829
Whale and other Fish Oils and all other articles the produce of the fisheries not specially provided for			
PICKLES, ETC.	35 per cent.	285,408	
BUTTER, CHEESE	Butter 4c. per lb Cheese 3c. per lb	405,209	
BACON AND HAMS	3c. per lb.	467,206	
PORK BARRELLED IN BRINE	2c. per lb.	372,094	
OTHER MEATS			
Fresh N.E.S.	3c. per lb.	330,205	
Canned and Canned Poultry and Game, extracts of meats and Fluid Beef not medicated and Soups	25 per cent.		
Mutton and Lamb Fresh	35 per cent.		
SUGAR, ETC.		8,209,432	
All Sugar above No. 16 Dutch standard in color and all refined sugars of whatever kinds, grades or standards ..	1c. per lb.		
VEGETABLES W.O.P.	25 per cent.	866,869	
Tomatoes and other Vegetables including corn and baked beans in cans or other packages N.E.S. the weight of cans or other packages to be included in weight for duty ..	1½c. per lb.		
WOOL—RAW	Free		1,188,932
SAUSAGE CASINGS NOT CLEANED	Free		Imports not specified

N.B.—A preference rate of Duty, which is one-third less than ordinary, is allowed on all dutiable goods imported from New Zealand.

INDUSTRIAL CANADA



THIS SPACE WILL BE SOLD TO ADVERTISERS TO ILLUSTRATE THEIR PLANT OR THEIR GOODS. WRITE STATING MONTH YOU WISH YOUR ADVERTISEMENT TO APPEAR.



PUBLISHED MONTHLY *by*
The CANADIAN MANUFACTURERS
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BRANCH OFFICES, TORONTO, MONTREAL,
WINNIPEG, VANCOUVER, HALIFAX, QUEBEC.

TO THE VARNISH BUYER

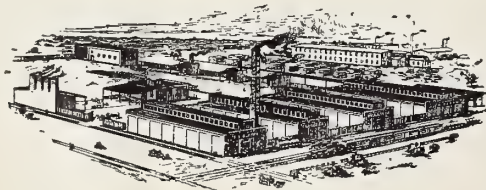
the most serious considerations are **quality, reliability and uniformity**, and these qualifications are of special importance to the dealer who is trying to build up a permanent varnish trade.

Berry Brothers' label or brand may be safely relied upon as ensuring the above conditions.

Our varnishes are the safest goods to handle and the surest and most reliable goods to use.

Write for 100 page Illustrated Catalogue.

Every dealer should have a Copy for Reference

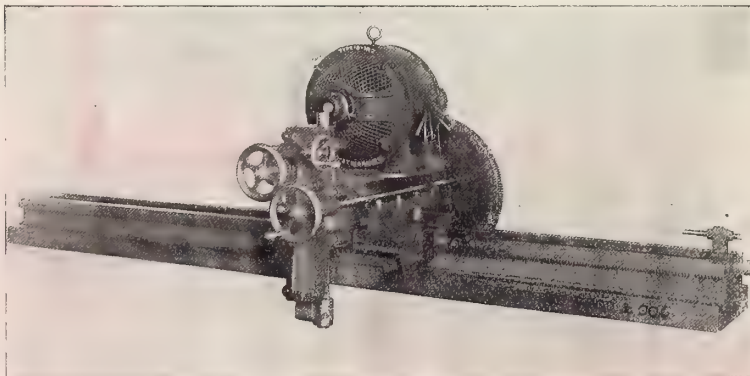


BERRY BROTHERS,
LIMITED
VARNISH MANUFACTURERS

WALKERVILLE, - - - - - ONT.

Be Progressive

Drive your machinery and machine tools with



Westinghouse Type S Motor Driving Underwood Portable Milling Machine

Westinghouse Motors

Direct electric drive is the most efficient and economical means for driving all classes of machinery. It is the most flexible. It wastes no power. It eliminates all shafting, pulleys and belting.

Canadian Westinghouse Co., Limited.

General Office and Works: HAMILTON, ONT.

For particulars address nearest office

Lawlor Bldg., King and Yonge Sts.
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152 Hastings Street
Vancouver

Hamilton
922-923 Union Bank Bldg.
Winnipeg

Sovereign Bank of Canada Bldg.
Montreal
134 Granville Street
Halifax

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Canadian National Exhibition

TORONTO, ONT.

August 27th - - 1906 - - September 10th

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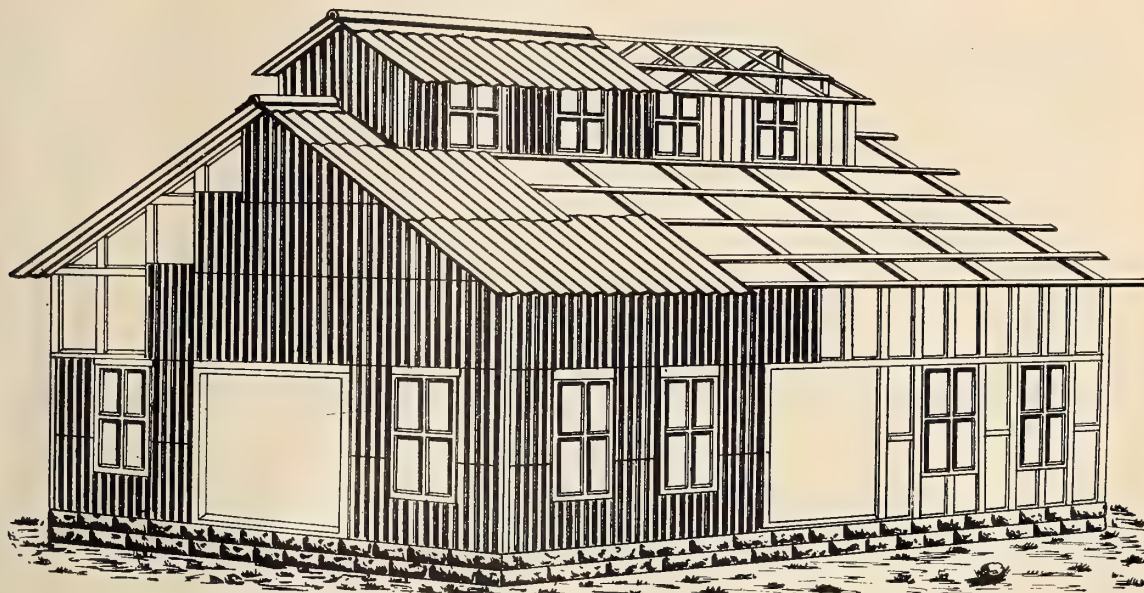
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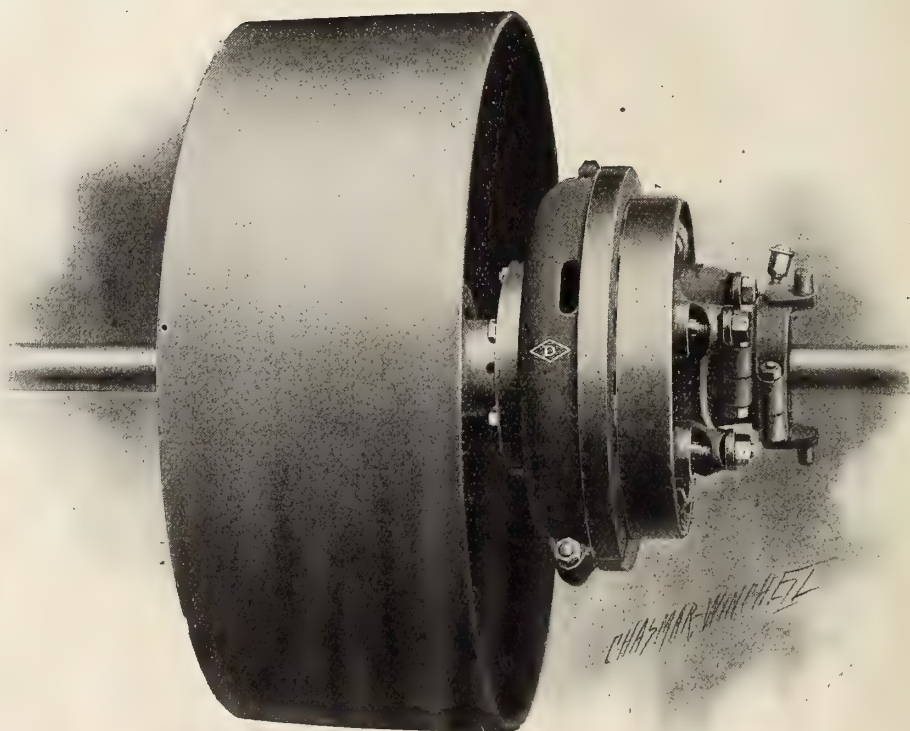
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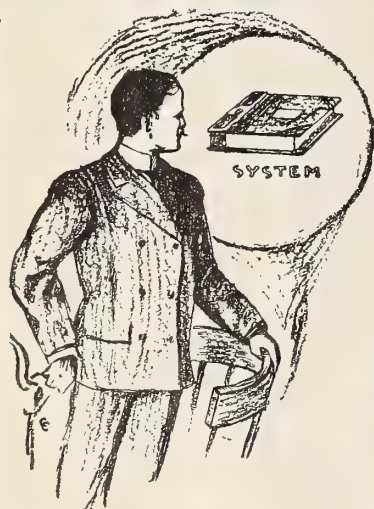
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Incorporated.

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THE ANNUAL CONVENTION.

ARRANGEMENTS are far advanced for the convention at Winnipeg on September 17th, 18th, and 19th, when the members of the Canadian Manufacturers' Association will meet in the flourishing capital of Manitoba in their thirty-fifth annual convention. Each year the growing membership makes the Association more and more representative of Canadian industrial life and consequently the meeting this year will be of greater importance than any which has preceded it.

Much work of value has been accomplished by the Association during the past year. The various departments have developed greatly in usefulness. The officers are reaching out and extending assistance to the members in every conceivable direction. The various committees have been doing valuable service in the work to which they were allotted. In fact, the Association has made its influence felt in every case in which the rights of manufacturers were at stake.

With this record of work behind it the members will gather with great hopes for the future. It is safe to predict that, besides the regular work of the meeting, plans will be laid which will make the coming year one of real advantage to the manufacturers of Canada, and to the country at large.

The importance of the conclusions arrived at, however, will depend in no small measure on the number of members who are present to endorse them. We do not mention the special attractions in the form of the excursion as a reason for a large attendance. The meeting itself will be reason enough and will amply repay anyone for whatever sacrifice may be required in taking the trip.

Mr. Stewart, the Secretary, has just returned from Winnipeg, where he has been working with the members of the Manitoba branch in arranging for the convention. The Manitoba branch is taking hold of the matter with true Western enthusiasm, and all that its members can do to ensure success in advance is being done. The whole West is taking a keen interest in the excursion. The visitors may look for abundant hospitality with a chance to see the West in the glory of its harvest season. Members will do well to arrange to spend September 17th, 18th and 19th in Winnipeg.

BRITISH CONSULS AND CANADIAN MANUFACTURERS.

SELLING goods to the United States has always been surrounded with difficulties to Canadian manufacturers. Investigation of the conditions of the market and the possibility of finding a sale for any particular line of goods is beyond the power of most individual manufacturers, and Canada has not a single commercial agent in the Republic. Hence the action of Mr. F. C. T. O'Hara, Commissioner of Canada's Commercial Agencies, in getting into communication with the British consuls in the United States, is highly commendable, and the uniform willingness which they have expressed to assist Canadians in every possible way is most gratifying.

Canadians have always felt that in cases where the personal rights of any British subject were at stake the services of the British Consuls were absolutely at their command. But they were diffident about going to them for assistance in matters of trade and commerce, from the fact that the people of the British islands supported the consuls, and what information they might give Canadians would in all likelihood be used in direct rivalry with British firms.

However the Consuls have taken a broad view of their duties and have incidentally done much to crystallize the feeling of fellowship existing between all members of the Empire. Canadians, as they begin to realize that access to

Consuls is as free to them as to any citizen of Great Britain, will feel much more strongly than before that they are a part of the empire.

The importance of becoming thoroughly acquainted with the needs of foreign peoples if we expect to sell them goods is self-evident. The United States recognizes this and has many Consuls throughout the whole world watching and reporting on the local conditions. Canada, too, has commercial agents in several countries, and their work has been most satisfactory. However, in the United States, where under ordinary circumstances we might expect to find a large market, the work of studying the conditions has been left to the individual exporters.

But, as a result of the interpretation of their position by the British Consuls a far-reaching service is opened up. The Consulate of the Empire is old and well-established, and holds a deservedly high position for the ability of its members, and the excellence of its organization. It is in the best possible position to collect information bearing on any subject of commercial interest. Every important city in the United States has a representative, and these are in constant contact with the business interests of their district. Canadians, consequently, who desire to open up an export trade with the United States have the machinery ready to hand for gathering information which they may need.

Canadian manufacturers should not be slow to take advantage of this opportunity. No doubt the excessively high tariff in the United States prevents the exportation into that country of many lines of goods. There is much, however, which we can sell to the American people. The amount of our present exports proves that. Moreover, the growing agitation across the line in favor of a tariff revision may possibly result in the opening up of that market to Canadian commerce still more. When that time comes, if Canadians have a proper knowledge of what the people of the United States want, and show enough adaptability to make their products meet the requirements, they should be in an excellent position to capture a fair share of the market. Everything now points to the ability of Canada to manufacture as economically as any other country. With abundance of raw material, rapidly improving transportation facilities, great water powers, and proximity to the market, we should have a good chance with other foreign competition in the United States.

WORKINGMEN'S HOUSES.

MANUFACTURERS in the larger centres, particularly Montreal and Toronto, have become quite exercised of late over the manner in which rents have been soaring skyward, and in the latter city investigations are now being conducted with a view to evolving some plan whereby the shortage of moderate priced houses for working men can be supplied.

Even to the casual observer it must be apparent that the situation is growing quite serious. "The News," of Toronto publishes a statement to the effect that there are less than 2,000 houses in that city renting for \$10 a month or under, while there are 22,000 male employees, engaged in the various industries, whose wages would not justify their paying more than the amount mentioned. Assuming that there are two breadwinners to every house thus occupied, it means that 18,000 hands are left to shift along as best they can. A few have found temporary accommodation in miserable hovels or stables, unworthy of the name of homes; a somewhat larger number, unable to swallow their pride, have undertaken to pay rents which can only end in their financial

undoing via the office of the loan shark, while still more have resorted to the unsatisfactory and unsanitary expedient of "doubling up," two, three, or sometimes even four families combining to pay the rent of a single house.

Among the skilled artisan class, conditions are almost as bad. The sober mechanic, who has some education and refinement, naturally craves for home comforts and congenial surroundings in which to bring up his children, but the class of house he would like to occupy, and which he could occupy in many a city in the United States on a wage of \$20 a week, costs him in Toronto anywhere from \$25 to \$30 a month.

Such conditions are not conducive to contentment among factory employees, and the situation is deserving of serious consideration. The moderate priced house is being literally legislated out of existence by avaricious property owners, who are securing the enactment of building restrictions and the extension of the fire limits simply to serve their own selfish purposes.

The remedy lies not in a general increase in wages, for many industries are already paying as much as they can afford, but in the adoption of some means whereby rents will be maintained on a more reasonable and more stable basis. The suggestion that the municipality should vote an appropriation for the purpose of acquiring a tract of land and building thereon suitable homes for the working classes, has much to recommend it. Under the management of an able commission there is no reason why desirable homes could not be built and rented at prices which would be well within the reach of the working-classes, and which would, at the same time pay interest charges and provide for a sinking fund. By allowing the monthly payments to apply on the purchase of these homes the workman would be encouraged in habits of thrift; he would learn to take a greater pride in his surroundings, and would be generally speaking, more happy and contented.

It has been done scores of times by private enterprise, as witness the towns of Cadbury and Port Sunlight in England. Coming nearer home, the Dominion Iron & Steel Co., at Sydney, C.B., has recently inaugurated a building association which is proving of material advantage to employer and employee alike. Toronto or any other Canadian city can do the same if she only thinks she can.

CHEAP INDUSTRIAL ALCOHOL.

THE enormous increase during recent years in the use of engines of the internal combustion or explosion type makes the subject of the free entry of alcohol for industrial purposes one of great moment. Side by side with an increased use of these engines has gone a steady increase in the price of gasoline. Unless something is done to offset this there will be a serious handicap to the manufacture and use of this class of engine.

It is a matter of general knowledge that Germany has benefited greatly from the free introduction of denatured alcohol. Her industries are placed at a distinct advantage over those which are subject to high prices for fuel. The average amount of gasoline in petroleum is only 2 per cent., and even this quantity is held by so close a monopoly that the price is growing excessively burdensome. Gasoline engines are being manufactured on this continent at the rate of over 100,000 per annum. This number will be greatly increased if a more economical means of operating them is provided.

It is impossible here to mention the number of industries in which these engines are used. In the more highly developed industrial districts they are used to supply the

motive power for railroad trains of two or three cars on the side lines. They are used extensively in manufacturing plants, in vehicles, such as automobiles, and they are coming into increasing favor in various processes of agriculture. However, it must inevitably follow that if the price of gasoline continues to rise, as it undoubtedly will, since the supply of it is limited, the use of these engines and many industries depending upon them will suffer severely.

Manufacturers and others who are urging a change in the inland revenue regulations so that alcohol may be bought for industrial uses without the prohibitive excise duty, which is now exacted, do not ask anything which is contrary to the spirit of the present law. The framers of the law had no desire to curtail the use of alcohol in any other form than that of a beverage. Much less did they intend to restrain manufactures. The extensive use of alcohol for heat, light and power is a comparatively recent development. It is perfectly legitimate and should not be subject to the disabilities which it is found prudent to put upon it when bought as a beverage. Formerly it was found impossible to differentiate between what was bought for one purpose and for the other, and the possibility of fraud prevented manufacturers from receiving any consideration. Now it is possible to denature it and make it unfit for drinking. With proper provision for this there should be no objection to manufacturers and other users of engines getting their supplies without the heavy internal revenue tax.

The need for prompt action on the part of the Canadian Government is emphasized by the fact that the United States has passed a bill removing the inland tax from denatured alcohol in that country. This will give a great impetus to many manufacturers and unless our own manufacturers are placed on a like basis they will suffer greatly from the greater cost of production. Similar legislation in Germany has made it possible for manufacturers to compete in the markets of the world in lines in which other nations had greater advantages, but lacked cheap fuel. Where this competition is brought to our very borders the situation becomes much more serious.

Denatured alcohol under proper Government supervision is urgently demanded. Let not the Government wait till other countries have got a lead on Canada before removing the burdensome tax. The advantages that will accrue to various elements of the country, from farmers to manufacturers, as a result of a freer use of industrial alcohol, are ably set forth by Professor Cohoe in the present issue of "Industrial Canada." They are worthy of close consideration.

ARTICLES FALSELY MARKED "CANADIAN."

ASIDE light was thrown upon the methods of some United States manufacturers in the recent investigations into the Beef Trust, which showed that the American packers did not hesitate to label their goods as "Made in Canada," in order to secure the British market. The lack of morality in this was set down to the packers, and it was supposed that such conduct was confined to them. However, the United States Consular Reports for June 11th, containing a letter on the foreign commerce of Uruguay, would lead us to believe that the cases in which false descriptions are indulged in are not isolated, but that this form of deception is a wide-spread failing across the line. A paragraph from the Consul's report reads as follows:—

"This is an especially desirable market for breakfast foods, such as prepared oats, wheat, and barley. The custom of this country is to take a very light breakfast, usually a cup of coffee and a roll. To this is sometimes added a

breakfast food. The brands of these products are put up like the American articles, except that they are marked "Made in Canada," and that the general place of business of each company is given as London, England. The labels on these packages bear an American 'imprint,' and I am convinced that they are of American manufacture. While the real producer may, in this way, sell his goods, both he and the country lose the advertising."

Such imitation, while it may be the sincerest flattery, cannot be justified on any grounds. Where a Canadian firm recently used a false description in selling goods, justice was swift and stern. A six hundred dollar fine was assessed for using the word Sheffield to describe goods made in this country. Yet no action has been taken to stop the fraudulent practice in the United States. The only comment of the Consul who discovered this latest fraud was that the manufacturer and the country, i.e., the United States, lose the advertising. The right or wrong seems to consist in the success or failure of the scheme.

We do not wish to be considered as saying that the manufacturers of the United States are alone culpable. Commercial morality seems to have reached a low ebb in many quarters. The last few months have been rife in exposures, and muck-rakers have found only too much to exercise their talents on. Adulterated foods have been discovered. Unfair combinations in restraint of trade have been exposed. Business men whose ideas on personal honour are above reproach have lent themselves to commercial schemes of more than doubtful kinds.

What is to be the end of this? All trade and commerce depends upon honest dealings between man and man. No matter how close the inspection is the statements of the seller must be accepted in a large measure by the buyer. If this confidence is destroyed the whole fabric of business is rent.

Canada has suffered frequently from just such schemes as have been mentioned. It comes particularly hard, too, on a country whose reputation for manufactures and farm produce is just well in the making. Our wheat, our cattle, our cheese, our fruit, and practically every native production that we export to Great Britain have been adversely affected by inferior goods being sold by other countries under the name of Canadian. The reputation of Canadian goods will soon sink to the level of the counterfeit articles unless the public are warned of the deception. Canada must guard jealously the "Made in Canada" mark. No goods of inferior quality, whether made in foreign countries or at home, should be allowed to go forth with that Canadian national trade mark. The number of imitations show that the excellence which it represents is becoming generally known. It must be the work of Canadians to keep up the standard at home and expose deception from abroad.

SMOKE PREVENTION.

THE large and representative attendance of smoke inspectors at the convention held in Detroit last week is a fair indication of the interest that is being taken in the subject of smoke abatement by the big industrial centres of the United States and Canada. Being the first convention of the kind ever held the sessions were for the most part devoted to an informal interchange of ideas, and many interesting facts were brought to light which should prove helpful to those who are giving serious consideration to the solution of this problem.

One noticeable feature brought out by the discussion was the wide diversity of opinion which seems to exist as to the best means of proceeding under the by-law, whether a

policy of education and persuasion should be followed, or whether coercive measures should be adopted. In Chicago, where they have had a smoke ordinance for the past twenty years, the educative policy was persistently followed until less than three years ago. A change was then made to a policy of mild enforcement, giving way in turn to a policy of rigid enforcement on the first of February, 1906. During the past five months over 1,700 suits have been entered, and fines collected aggregating \$7,000. But Chicago is a big place. Its population is so dense that the air must be maintained reasonably pure at any cost. It already has more industries than it knows what to do with, and a few more or less make very little difference. Detroit and Milwaukee on the other hand, furnish excellent examples of the smaller city which has had a more limited experience in dealing with smoke abatement, and which is still reaching out for all the industries it can secure. In the former city, under a policy of education, upwards of 360 factories have been equipped with smoke-consuming devices in three years at an estimated cost of \$100,000. Only in cases of open defiance have fines been imposed, and then only to the extent of \$140 in eighteen months.

The problem is further complicated by a difficulty which smoke inspectors everywhere have experienced, and which to a certain extent interferes with their freedom of action. What is to be done in the case of a manufacturer who, after carefully studying the various devices on the market, installs at considerable expense what he believes to be the best, only to find his chimney still belching smoke in such a manner as to constitute a nuisance? Is he to be punished like the man who has openly defied the law, or is he to be dealt with leniently? And what justification can there be for compelling other manufacturers to go to similar expense when there is no positive guarantee that they will be any more successful?

The perfect smoke-consumer, despite what interested parties may say to the contrary, is still a thing of the future. Thirty years ago a Chicago manufacturer shouted "Eureka" and announced to an unbelieving world that he had solved the problem of perfect combustion. We have listened to the same story every year since, and will probably continue to hear it from various sources for years to come. Because a certain appliance works satisfactorily in one plant it is no guarantee that it will give satisfaction in another. Everything depends upon a proper understanding of the conditions governing each individual case, and these, *according to the stoker manufacturers themselves*, can rarely be ascertained without experiment. What we need is a deeper insight into the whole problem of combustion, and until we have fathomed it to its very bottom and learned to make practical application of the principles underlying it, it behooves our city officials to move with caution, and to do nothing that will jeopardize the industrial interests which it is so essential for us to protect.

BRITISH TRADE WITH CANADA.

A NNOUNCEMENT is made that the British Board of Trade will send a commission to Canada to discover the nature of the competition that is encountered by British manufacturers in this country. The need of a British consular service for the colonies has been pointed out in "Industrial Canada" before, and it is to be hoped that the results of the report of commission which is now coming out will be the establishment of such a service in Canada. The people of Canada are ready and anxious to buy from Great Britain. The trouble in the past has been that British manufacturers have

not studied the special requirements of the trade here, and have tried to sell goods which, while admirable enough in themselves, and suitable to the local conditions in Great Britain, yet did not appeal to the Canadian fancy. The bad effects of the neglect to meet the requirements of this market are all the more apparent because of the competition of a country which is quick to manufacture, not necessarily what it thinks is best, but what it knows is wanted. This is the condition which is everywhere evident in Canada; a genuine desire on the part of the purchaser to buy British goods, if the British maker would give him what he wants; but in practice, as is shown by a diagram on another page, the buying of a large proportion of imported goods from the United States because of the adaptability and the quickness of that nation to see what the people want and the readiness to supply it.

The manufacturers of Great Britain should recognize the fact that they are face to face with a difficult problem. For the trade of Canada they are in competition with a highly developed industrial country, lying close beside it. The advantages of the United States are briefly that of position, by which transportation is cheapened and quick deliveries are possible, and, more important, that of a similarity of mode of life. The articles which the people of the United States buy are very similar to those which the inhabitants of Canada buy. Hence it requires in many cases no, and in most cases very little, change to adapt the products of one country to the use of the other. Lastly, the United States have an extensive corps of consuls throughout the country watching keenly for trade openings and reporting daily on the requirements and possibilities of Canadian trade. On the other hand Great Britain has a tariff preference of 33 1-3 per cent., and the natural predisposition of Canadians in her favor.

But in business it is not well to count too strongly on sentiment. Canada's sentiment towards Great Britain would cause her to buy from the latter in preference to any other country providing the two countries put up exactly similar articles at the same price. It would not cause her to buy if the British product was less suitable than the other, or if the price was higher.

How to supply the Canadian market with what the Canadian trade wants is the problem which has not been altogether satisfactorily solved by British manufacturers in the past. Otherwise the present proportion of Canadian imports from Great Britain and the United States would be reversed. Can this result be accomplished in the near future? The appointment of a commission to investigate British trade relations with Canada shows that the effort is going to be made. An absolute essential to success is the production of goods which are suitable to the market. This can only be done by constant study of local conditions. Commercial agents must be appointed whose duty it will be to watch keenly the course of trade. From our close proximity to the United States we are constantly influenced by their inventions and processes. It will require untiring watchfulness to overcome this, but the prize is worth the effort.

Any efforts which Great Britain makes to wrest this market from the United States will be warmly seconded in Canada. We wish to manufacture every thing we can here, but there is necessarily much that we cannot make ourselves. It is this latter that we want to see go to British manufacturers. It is to our advantage, too, that such should be the case. Great Britain buys heavily from us. If the ships which we send to her ports, filled with Canadian produce, came back loaded with British goods, our transportation rates and facilities would be noticeably bettered. It is to be hoped that the British Board of Trade's action will result in an improvement in trade between the two countries.

TAX FREE ALCOHOL

By WALLACE P. COHOE, Professor of Chemistry, McMaster University.

IN entering upon a discussion on the subject of tax free alcohol for industrial purposes, it is not proposed, in this article, to dwell upon the economic side of the question. It will be sufficient to point out here that legislation, permitting the use of tax free spirits, will immediately make possible in Canada the use of alcohol for a multitude of purposes to which it cannot be put at the present time, on account of the stringent restrictions imposed.

The great bulk of revenue derived from alcohol at present results from inland revenue duties levied upon spirits manufactured as beverages. As industrial alcohol is rendered undrinkable by special treatment, the extended use of such a substance need not interfere with existing regulations in regard to spirits intended for human consumption. A certain amount of alcohol now used for industrial purposes would not be taxed. Concerning this point the Committee on Ways and Means of the United States Congress reported, "The objection then on account of the loss of revenue seems to have been fully overcome." Whether it is of greater advantage to the country at large to be in receipt of this revenue than to have the use of a substance of large value industrially, I leave for others to debate.

As I have said above, alcohol for industrial purposes, with a few exceptions, may be rendered undrinkable or "denatured" before it is put to its different uses. This has been for some years, and is now, satisfactorily done by mixing, under official supervision, with the pure spirit, certain definite amounts fixed by statute, of foreign substances not easily removed. These destroy the original character of the spirit, giving it a taste and smell which effectively render the mixture undrinkable. The character of the denaturing agent may be varied according to the use to which the spirit is to be put. Wood alcohol is most commonly used. Animal oil is another satisfactory agent. In cases where the ordinary denaturing agents interfere with a particular process, the practice in England is to use some substance, satisfactory in its nature, which is a part of the process itself. In every case the spirit is taken out of bond and denatured under excise supervision.

Certain classes of manufacture require a pure spirit. These manifestly come under a class by themselves.

The Uses of Alcohol.

The extent and variety of the uses to which alcohol is put at the present time may perhaps be best illustrated by the following table which shows the approximate quantities of unmineralized methylated spirits used in Great Britain during the year ending March 31st, 1901.

Nature of Manufacturing Operations or Other Purposes for which Spirit was Used.

	No. of Gals.
1. Making "finish" varnishes, lacquers, stains, paints, enamels, etc.	1,221,013
2. Soap manufacture	144,384



PROF. WALLACE P. COHOE. MA, PhD

	No. of Gals.
3. Hat making	121,104
4. Celluloid, xylonite, etc.	106,589
5. Ether, chloroform, iodoform	97,906
6. Fulminates, smokeless powder, and other explosives, (including War Office and Admiralty).	48,052
7. Preparation of solid medicinal extracts, medicaments, fine chemicals, etc.	39,637
8. Dissolving dyes and colors, and for dyeing and cleaning operations, etc.	28,943
9. Making photographic plates, emulsions, films, etc.	24,667
10. Making linoleum, pegamoid, lincrusta walton, and similar goods	21,128
11. Making embrocations, lotions, liniments, cattle, and other medicines	15,410
12. Making filaments, etc., in the incandescent lamp manufacture	14,964
13. In piano making	7,510
14. In silk, crepe and embroidery manufactures, mainly for stiffening	8,434
15. In the manufacture of aniline and other dyes and colors	5,657
16. In making fireworks	2,720
17. Plant washes, insecticides, etc.	1,564
18. In the manufacture of rubber.	1,600
19. For cleaning paint	1,150
20. In the manufacture of steel pens	1,669
21. Making blacking and leather dressings	4,180
22. In "silvering" mirrors, etc.	477
23. In corset making	590
24. Making sheep dips	450
25. Preparing surgical dressings.	1,040
26. Adjusting hydrometers, and in making compasses, thermometers, and other instruments	406
27. In oil refining	205
28. Electrotyping	128
29. Making inks	197
30. Various miscellaneous manufactures, etc., engraving, brass founding, watchmaking, china making, printers' rollers, black lead, candle making, artificial silk, artificial flowers, calico printing, cotton yarn, ropes, oil gas generators, etc.	1,487
31. Preserving specimens in museums, hospitals, infirmaries, etc., for burning in lamps, washes, lotions, and other purposes in hospitals, infirmaries and similar institutions, and also for laboratories and educational purposes	33,780
32. For the War Office and Admiralty requirements, chiefly at Woolwich and dockyards	30,624
Total	1,987,665

Broadly speaking, the uses of alcohol may be classified in three divisions. *First*, there are those operations in which alcohol is used as a solvent or medium; *second*, those uses where alcohol is used as a re-agent or raw material from which other products are made. In such cases the alcohol itself is destroyed and a new substance produced. A *third*

class of uses depends upon the fact that alcohol may be used for purposes of heat, light, and power. It will be possible on account of the vastness of the subject to discuss the uses of alcohol only in a most general way, indicating merely some of the more important points.

I.—Alcohol as a Solvent.

(1) Varnishes, lacquers, etc. On account of its power to dissolve many of the gums and resins, alcohol enters largely into the manufacture of varnishes, lacquers, finishes, enamels and like products. It is particularly well adapted for those lacquers which are applied warm. The variety of industries using spirit varnishes and lacquers is so large that it is impossible to go into detail here.

(2) Smokeless Powder. This very important industry is at the present time absolutely dependent upon alcohol as a solvent. The price of alcohol is a vital question in the manufacture of those powders of which nitro-cellulose is a constituent. A very small difference in price will turn the scale between profit and loss.

(3) Hat Making. Large quantities are used in the manufacture of stiff and silk hats.

(4) Transparent soap.

(5) Coal Tar Colors. The statement has frequently been made that England lost the coal tar industry to Germany because of the restrictions put at that time upon the use of alcohol. However closely this may come to the facts of the case, it remains true that alcohol is a necessity in this very important industry. Alcohol does not enter into more than 25 per cent. of the colors produced at the present time. As however, the manufacture of these substances for a profit depends on the successful recovery in many cases of the by-products, in which recovery alcohol is used, it is easily seen that favorable conditions in respect to the use of alcohol are an essential to its success.

(6) Synthetic Products and Fine Chemicals. The importance of these industries is shown by the mention of the names of such substances as the synthetic perfumes, synthetic flavors, antipyrine, phenacetine, sulphural and a host of others. If these are ever to be manufactured in Canada, the price of alcohol here must at least not be in excess of that in competing countries.

(7) Celluloid, Xylonite, etc.

(8) Artificial Silk. This industry bids fair to be most important in the future. Here again the price of alcohol is vital as according to the British commission one pound of silk represents the use of nearly a gallon of strong combined spirit and ether.

II.—Alcohol as a Re-Agent or Raw Material.

The variety of uses here again is very large, but only three well known and important cases will be cited.

(1) Ether. Alcohol is the principal constituent used in the manufacture of ether—a substance widely used for a variety of purposes. In this industry the question of price is paramount as it requires more than a gallon of strong spirit to make a gallon of ether.

(2) Vinegar. Large quantities of vinegar are at the present time made from alcohol and sold in Canada under excise supervision, by the quick vinegar process. In this process the alcohol takes up oxygen from the air and becomes converted into the acid vinegar.

(3) The Fulminates. These substances form the explosive part of percussion caps. In their manufacture alcohol

is changed over and uniting with a metal forms a substance which explodes most easily.

III.—Alcohol as a Source of Light, Heat, and Power.

(1) Heat. Although alcohol has been burned in spirit lamps since very early times, the problem of its use as a regular heating agent has never been attacked seriously until quite recently. The abundance of mineral oils has probably been the cause of this lack of attention. Latterly, however, conditions have been changing. The price of oil is likely to rise, and there is the prospect of its ultimate failure. In America at the present time the oil output is controlled by a trust. The prospect for the future use of alcohol is bright. An abundance of raw material is going to waste every day. Nature has provided the germs of fermentation and the result is that alcohol is produced spontaneously in every garbage pail. Alcohol can be produced cheaply. If, as Canadians, we are looking for a raw material from which to make it, there might be mentioned the thousands of car loads of wheat screenings which the farmer and elevator man do not know how to dispose of at the present time. We have a wealth of raw material, not liable to run out, not controlled or capable of being easily controlled, by any one class. There is no physical reason why we should not have alcohol in abundance.

(2) Light. Although pure alcohol burns with only a feeble flame, yet special lamps have been designed for its use. In these the flame heats up a mantle which becomes luminescent. Experiments have been made which show that one gallon of alcohol is equal to two gallons of kerosene for lighting purposes. It is quite safe to predict in the future a large use of alcohol for lighting purposes.

(3) Power. This problem is one which is becoming more difficult every year. Alcohol may be used in engines of the explosive type, like gasoline. In the past the abundance of this latter substance has made it unnecessary to resort to any other. In view of the great extension of the uses of gasoline in the past few years, and the consequent increase in price, the use of alcohol as a substitute is looked upon as a matter of immediate interest. It is stated that a gallon of alcohol will produce 10 per cent. more power than a gallon of gasoline. Alcohol has been used in agricultural engines in Germany for years. Its success there has led to the expectation that a few years will see its common use in motor vehicles and motor boats especially. In Germany, where alcohol is cheap and where the sale of oil is not so free as here, the consumption for the purposes named above is surprising, as may be judged by the following figures which show the consumption in the year to September 30th, 1903.

Proof Gallons.

For domestic use (mainly light and heat) about...	33,900,000
“ motor and other engines	1,100,000
“ industrial purposes	14,000,000
Total	49,000,000

The above will serve to indicate the uses of alcohol. No attempt has been made at inclusive treatment but it is hoped that from the examples given, an idea, at least, of the magnitude of the subject will be obtained.

I propose to show briefly next the essentials of the regulations which are in force in several other countries with respect to the use of tax free alcohol. Having this it will be possible for the reader to compare our conditions in Canada with those existing in competing countries.

Great Britain.

I. Methylated Spirit.

- A. Ordinary methylated spirit for use in manufacturing operations. This consists of 90 per cent. ordinary alcohol with 10 per cent. wood naphtha of approved type.

The denaturing can be conducted only by licensed persons, under excise supervision, in quantities of not less than 500 gallons. Not less than five gallons will be sold at any one time, and only to such persons as have permission to buy. Users of over fifty gallons per annum may be required to furnish bonds for due observance of conditions.

- B. Mineralized Spirit. This constitutes the methylated spirit sold to the general public. It consists of the "ordinary" methylated spirit to which is added 3-8 of 1 per cent. of mineral oil.

II. Spirits denatured with other substances than wood naphtha. Special denaturing re-agents are allowed in the following manufactures: (1) Coal tar colors. (2) Xylonite, etc. (3) Fulminates. (4) Coconut oil refining. (5) Making electric lamps.

III. Undenatured alcohol is allowed under certain restrictions to college and public institutions.

Germany.

I. Pure spirit may be used duty free for:—

- (a) Use in state or municipal hospitals.
- (b) Use in scientific institutions.
- (c) Making smokeless powder, fuses and fulminates.

II. Denatured spirit may be used duty free. Denaturing may be "complete" or "incomplete."

- (a) Complete denaturing.

(1)

Wood spirit	2.	per cent.
Pyridine bases .....	.5	" "
Oil of lavender or rosemary (optional) ..	.125	" "
Alcohol	97.325	" "

This is the spirit commonly sold under license, for domestic use—lighting, heating and cooking.

(2)

Alcohol	100 parts.
Wood spirit and pyridine bases	1-¼ "
Methyl violet dye solution	1-¼ "
Benzine	2-20 "

This spirit is used especially in internal explosion engines.

- (b) "Incomplete" denaturing.

- (1) Alcohol
- | | | |
|-------------------------|---|---|
| Wood spirit | 5 | " |
| or pyridine bases | ½ | " |

Sale and purchase is confined to licensed persons and ½ gallon is the smallest amount sold at any one time.

(2) Special denaturing agents are allowed. The regulations cover 28 classes and sub-classes. The principal industries are covered by the four alternatives of:—

An addition to every 100 parts of alcohol of 10 parts of ether, or 1 part of benzine, or ½ part of turpentine, or .025 parts of animal oil.

Denaturing may be done only by authorized methylators under excise supervision, in quantities of not less than 22 gallons.

France.

Denatured alcohol pays a statistical tax, equivalent to about 15 cents per 100 proof gallons, about 35 cents per 100 proof gallons, to cover expense of examination and supervision of denaturing operations.

- (1) General denaturing process:

Ten parts wood spirit of special character are mixed with 100 parts alcohol. Spirits denatured in this way are divided into two classes.

(a) For lighting, heating and making "finish," to the above is added .5 per cent. heavy benzine, when used for lighting and heating, and when used for "finish" 4 per cent. gum resin.

(b) For manufacturing purposes. Certain industries which cannot use the above are allowed special agents.

The sale of denatured spirit is subject to strict regulation.

United States.

A bill has recently passed both houses of Congress which provides for the withdrawal from bond, of alcohol for industrial uses, free from duty, which shall be mixed with a suitable denaturing agent. The bill provides for regulation by the Commissioner of Inland Revenue. As the bill only passed Congress on the 28th of May, the specific regulations are not yet available. The bill goes into effect three months after its passage.

In the above paragraphs I have endeavored to point out what the uses of alcohol in general are and to indicate the existing regulations in competing countries. In conclusion I wish to refer to the fact that the benefits derived from duty free alcohol would not be confined to any one class of individuals. The matter is one of national interest. The benefits which would result to the manufacturer are quite obvious. To all is provided a cheap and efficient source of light, heat and power. To the agricultural community would be provided an outlet for much that at the present time goes to waste, and an increased market for much that is produced at the present time. Our country is growing rapidly, but if we are to make the most of what nature has given us, artificial restrictions must be made as easy at least as they are in competing countries.

Problem of Power.

An interesting booklet has been issued by the Canadian section of the Society of Chemical Industry containing a series of papers on the economics of power production. The articles deal with Fuels and Flue Gases, Smoke Consumers and Mechanical Stokers, Boiler Waters, Producer Gas, and The Commercial Development of Power from Gas, with a number of appendices on power problems. The subject of power with its side questions of smoke consumption, etc., is of great importance to manufacturers and a perusal of the articles now published will be of value to them in dealing with the problems which constantly arise. A copy of the booklet may be had from the Secretary, Mr. Alf. Burton, 44 York Street, Toronto.

Mr. George Moores, Secretary of the British Weights and Measures Association, who has been spending some time on this continent, has returned to England to be present at the convention of the Chambers of Commerce to be held this month. Mr. Moores will support the resolution to be presented by the representatives of the Canadian Manufacturers' Association, on weights and measures.

THE COMMERCE OF CANADA

REPORTS just issued from the Department of Trade and Commerce show an encouraging increase in the total trade of Canada. Unfortunately our imports of manufactured articles are still very great, although in many cases the work could be done just as economically in this country. The subjoined diagrams show the source of our imports and the destination of our exports. It will be noticed that the United States' share of our business is very large. A good feature of the trade with that country, however, is that whereas the increase in imports from the United States was \$6,191,578 for nine months ending March 31st, 1906, over the same period a year before, the increase in exports to the United States was \$12,223,365 for the same period. The percentage increases are still more interesting. Our imports from the United States increased during the nine months 5.29 per cent., while our exports to that country increased 22.29 per cent. For the same nine month periods, the increase in imports from Great Britain was \$6,811,379, and in exports

\$23,579,728. These figures represent percentages of 15.58 and 29.40.

Again, if we consider the total trade of Canada with the rest of the Empire and with the United States, we find that the Empire's share is 29.32 per cent. of our imports and 59.08 per cent. of our exports, while that of the United States is 59.40 and 35.35 respectively.

Our foreign trade is not yet all that can be desired. We still import large quantities of manufactured goods, and every dollar's worth of this is going to build up a foreign country. To quote from a letter of Senator James McMullen in the May issue of *INDUSTRIAL CANADA*, "this" (referring to the purchase from the United States of 84 million dollars worth of manufactured goods per year) "means that we Canadians have about 56,000 mechanics in the United States working for us every day, earning an average wage of \$2.50 per day or \$750 annually, and if each mechanic is the head of a home, we are supporting 56,000 homes,* or a population of 280,000 people, which

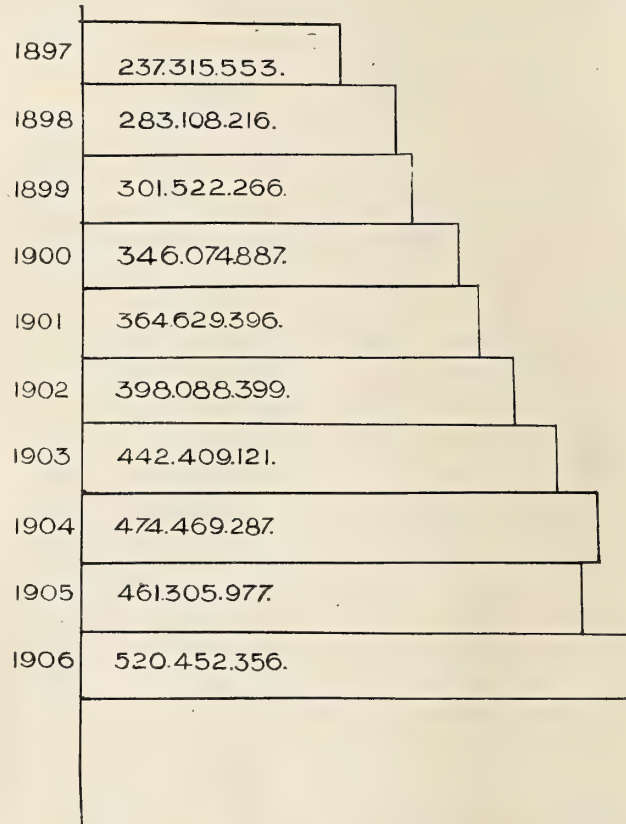


Diagram Showing the Value of Canada's Total Foreign Trade for nine month periods, ending March 31st, for ten years from 1897.

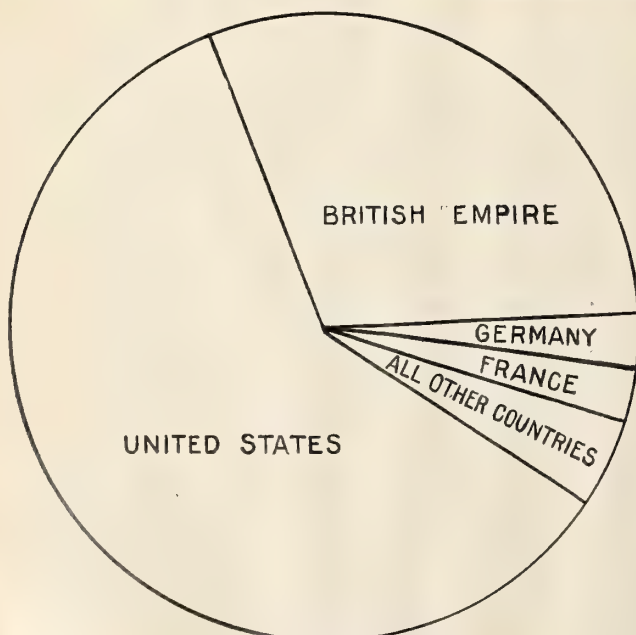


Diagram Showing Relative Amount of Canada's Imports from Leading Countries.

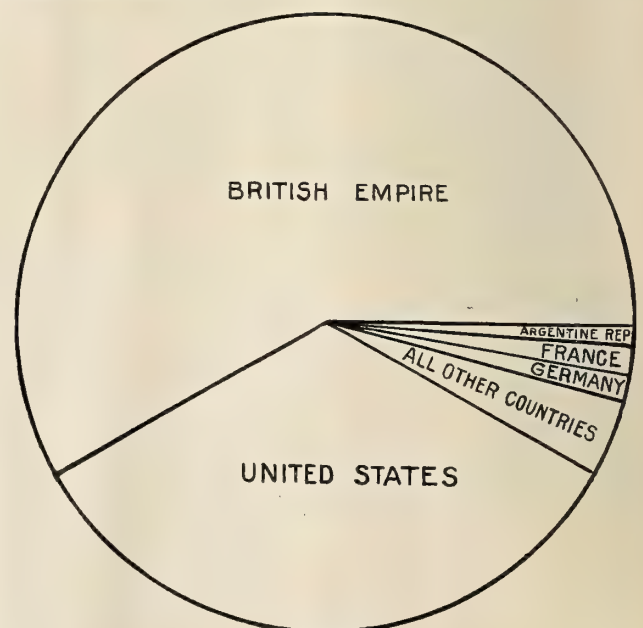
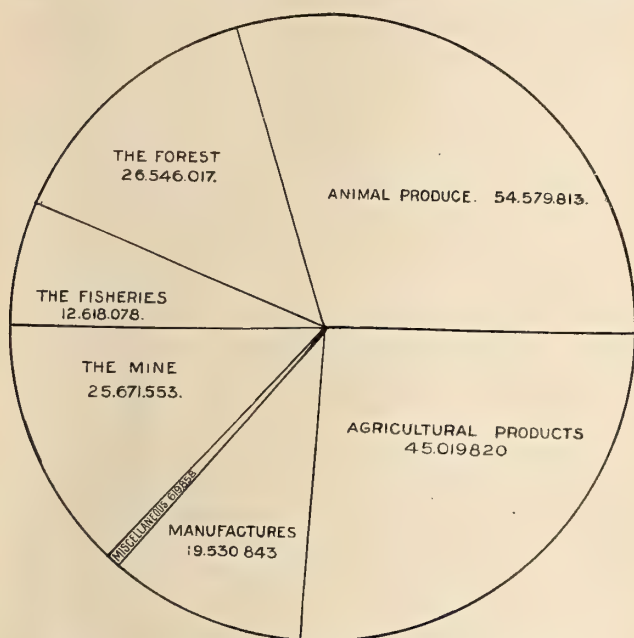


Diagram Showing Relative Amount of Canada's Exports to Leading Countries.

would make a city virtually larger than Toronto, all working to supply Canadian wants and at the same time consuming American products and wearing American goods."

The figures, as quoted, show that Canada should do more of its work at home. Great Britain imports an immense amount of goods annually, but any adverse balance of trade is far more than covered by revenues from shipping, insurances, and the countless foreign investments of British capitalists. Canada has practically nothing of this kind to rely on. If we buy twenty million dollars worth more than we sell, there is that amount of money going out of the country. The question is where will this



Value of Canada's Exports for nine months ending March 31st, 1906.

stop? A severe annual drain must tell sooner or later, and it is the height of folly to continue in the course which is manifestly impoverishing the country. Particularly is this the case since our natural resources are so rich as to excite the envy of all peoples. Reckless squandering of these resources, by handing them over to other countries to be manufactured, will sooner or later leave Canada impoverished. Raw materials represent only a tithe of their ultimate value. The labor that is placed on them in most cases increases their value many fold. A one-sided development is to be carefully guarded against, and the way to do this in a country where agriculture predominates is to strengthen manufacturing industries.

Statisticians in the United States have figured out that trade moves in ten year cycles. That country experienced severe panics in 1873, 1883 and 1893. Canada has now had a ten year period of unexampled prosperity, yet there seems to be no signs of a reaction. With an increasing population the danger of over-production is minimized. Added to this is the great relative value of the average crop, considering the total number of inhabitants. The per capital trade of Canada is very high. She stands eleventh among the nations of the world in the value of her yearly imports and fourteenth in exports. From the present showing the current year will even improve this position.

A CONCRETE EXAMPLE.

AN English correspondent to an American magazine cites an example of how free trade works out in competition with protected manufactures.

"One of the best object lessons that has ever come to my notice, illustrative of our present fiscal system," he says, "is that of a British firm who, a few years ago, started as manufacturers of a certain kind of horn buttons, exporting a considerable quantity of them to the United States. The McKinley tariff when it came into effect speedily destroyed that part of the manufacturers' trade. The firm then went into the trade of ladies' buckles, and these ladies' buckles had a large sale in France. Then came the French tariff (the Niclin tariff). That trade was destroyed. A third time the same firm turned their enterprise into a different channel, consisting of the production of buttons from buffalo horn. A large quantity is sent to Germany, where the tariff on this particular article is only five per cent. But it is a profitable trade, and Germany, carrying out its deliberate policy in the new tariff, which becomes operative a few months hence, has imposed a duty of 25 per cent., which means a prohibitive duty. The only thing for the British firm to do, if they wish to retain their German trade, is to open a factory in that country, probably with German labor. If they do that they will have not only within the German tariff full command of the German market, but they will be able to keep their English market, because the British ports are open, while the Germans close theirs. Not only does the manufacturing leave the country, but the same firm will be able to supply the British trade from Germany with goods made by German operatives and probably using German-made plant, etc. So you see the Germans have it all ways. And that sort of thing is going on all over the country to-day. What became, too, of the workpeople who lost their employment at each successive change of the firm's career? The skilled artisans who made the horn buttons could not produce the ladies' belts. They are two distinct branches of skilled labor. The inference is that with each dislocation of industry, such as those I have described, large numbers of skilled men are thrown on the labor market, and eventually drift into the ranks of the unskilled, ultimately becoming the 'unemployed.'"

This is a succinct, yet telling, account of the effect of free trade on industrial progress. Its application to Canadian conditions is instructive. Canada is placed alongside a country which is far advanced in manufactures. For many years our neighbor to the south has had a large home market, and with increased consumption has come increased specialization. To-day whole plants are given over to the manufacture of each individual article. This was made possible by the protection which gave the United States market to the United States manufacturers. Not only, then, are our Canadian manufacturers shut out of that market, but they are placed in an unfavorable position in our own. We have to meet the competition of those who manufacture thousands where we manufacture tens or hundreds. In other words, the United States secures the cheapest goods, because by protection it enables its manufacturers to manufacture in the greatest quantities, and hence at a minimum cost.

What is to be our policy in this regard? The result of the action of the United States is patent to every eye. Its growth has been phenomenal. Its artisans are numbered by the million. To feed this great people its great agricultural population is kept busy.

Are we in turn going to keep our workmen in our own country, increase the home market for our agricultural products, and keep our money in circulation at home? This is the question for Canadians to decide at the present time.

FREIGHT RATE GRIEVANCE.

Do Railways Violate Long and Short Haul Clause of Railway Act ?

The attention of the Railway Commission has recently been directed to the discrimination in freight rates charged by our Canadian railways upon east-bound traffic from Ontario shipping points in comparison with the through rates upon traffic originating in Michigan, Indiana, Illinois, and other States. Although manufacturers and merchants in the western portion of Ontario for many years past have vigorously protested against the exaction of higher rates upon their shipments than the through rates charged from more westerly United States shipping points, few, who are not directly interested in the subject, understand the extent of this discrimination against Canadian traffic.

Comparative Rates.

The following tables are inserted to give a general idea of the differences.

Rates in Cents Per 100 Pounds.

From.	To Ottawa and Montreal.					Classes.
	1	2	3	4	5	
Chicago	75	65	50	35	30	
Cincinnati	71	61½	47½	33	28½	
Detroit	58½	50½	39	27½	23½	
Windsor	70	61	53	44	35	
London	66	58	50	41	33	
Pittsburg	65	56	43	30	25	
Buffalo	44	38	30½	21½	18½	
Hamilton	54	47	41	34	27	

From.	To Quebec.				
Chicago	89	77	60	43	36
Cincinnati	85	73½	57½	41	34½
Detroit	72½	62½	49	35½	29½
Windsor	84	73	64	53	42
London	80	70	61	50	40
Pittsburg	79	68	53	38	31
Buffalo	58	50	40½	29½	24½
Hamilton	68	59	52	43	34

From.	To St. John.				
Chicago	95	83	66	49	42
Cincinnati	91	79½	63½	47	40½
Detroit	78½	68½	55	41½	35½
Windsor	90	79	68	57	45
London	86	76	65	54	43
Pittsburg	85	74	59	44	37
Buffalo	64	56	46½	35½	30½
Hamilton	74	65	56	47	37

From.	To Halifax.				
Chicago	95	83	66	49	42
Cincinnati	91	79½	63½	47	40½
Detroit	78½	68½	55	41½	35½
Windsor	92	81	70	58	46
London	88	78	67	55	44
Pittsburg	85	74	59	44	37
Buffalo	64	56	46½	35½	30½
Hamilton	76	67	58	48	38

Grievances Are Real.

Looking at these figures it is small matter for wonder that shippers in Windsor and Chatham should complain when charged a fifth-class rate of 35 cents to Montreal, while from Chicago the fifth-class rate is only 30 cents, and from

Detroit 23½ cents; and the merchant in London can hardly be expected to remain quiet under a charge of 61 cents for third-class freight to Montreal while Chicago merchants may ship over the same lines to this point for only 60 cents, and Detroit merchants for 49 cents. Valves shipped from Walkerville to Toronto are required to pay a rate of 30 cents less than carload; from Chicago the rate is only 24 cents, but if the shipper could hand them to the railway at Detroit instead of at Walkerville he would only be asked to pay 18 cents per 100 pounds. Of course, he could cart them over for less than this difference of 12 cents, but the customs difficulties are in the way.

When Professor S. J. McLean was commissioned by the Dominion Government to investigate railway rate grievances this matter was dealt with among others, and is referred to in his report. Following this report came the Railway Act of 1903 under which the Board of Railway Commissioners was created. By many it was thought that the Railway Commission would continue the investigation of rate grievances begun by Commissioner McLean with a view to effecting adjustments. There appears to be an erroneous impression abroad still that the Railway Commission will, of its own motion, undertake the investigation and correction of these apparent wrongs. Such has not been the practice of the Commission up to the present time at least, and it becomes necessary, therefore, for those who are aggrieved to bring their complaints formally to the notice of the Board, after which investigations follow.

Formal complaints have recently been made by some of our manufacturers in Walkerville, Windsor and Chatham against the excessive rates which they are compelled to pay to eastern points when compared with the rates upon similar freight from competitive manufacturing points in the United States. These cases having been fully heard and submitted it is now a question for the Railway Commission to decide whether or not under the long and short haul clause of the Canadian Railway Act such discriminations are justified and may be permitted to continue. It was admitted by representatives of the railways, who appeared before the Commission, that the discrepancies in rates which prevail in Western Ontario, could not continue in the United States because of the long and short haul clause of the Interstate Commerce Act in force there. What peculiar feature of the Canadian Act will permit the continuance of a situation which would not be tolerated across the border has not been explained.

Reasons Advanced by Railroads.

In justification of their higher rates the Canadian Railways point to the density of population in the United States adjacent to Ontario, especially Michigan, Indiana, Ohio and Pennsylvania, as compared with the alleged sparse population of Ontario. They assert that climatic conditions are in favor of railway operation in United States and against Ontario. There is also alleged to be a very great difference against Ontario in the volume of traffic available. And the gross freight earnings per mile of line in Michigan and the other states mentioned are said to far exceed the gross freight earnings of railway lines in Canada.

These are matters which will require very careful investigation and consideration by the Railway Commission. Doubtless, there is a difference in the conditions surround-

ing the operation of railways in the two countries, but a question here naturally arises: Have not our railways by their present system of discriminatory freight rates in favor of the United States retarded the growth and development of Canadian industry and enterprise, and thereby contributed to the causes of the difference in conditions? In comparing the population and area of Ontario with the nearby States the railways include all the uninhabited portion of this Province, extending through to the Hudson Bay, whereas it is well known the population of Ontario is centred in a much more restricted area, as are also the railway lines of the Province. The volume of tonnage is a matter which cannot be properly understood until the railways submit actual figures showing what differences exist. The argument as to climatic conditions should be accepted with a great deal of reserve. It is well known that the conditions in Michigan and Ontario are not so dissimilar as alleged by the representatives of the railway lines.

The comparison of earnings per mile of line is made between United States railways operating in a restricted territory east of Chicago and Canadian Railways operating over the extensive territory from the Atlantic to the Pacific; a most unfair comparison to say the least. The operation of railway lines in Eastern Canada may be more expensive than in the nearby States of the Union, but this has not been demonstrated by any actual evidence as yet. We know, of course, that there is a customs duty upon coal; on the other hand the amount of taxation is greatly in favor of Ontario and against the United States. Wages do not appear to be higher in Ontario than elsewhere, in fact, so far as our information goes they are the reverse, certainly management expenses are less here than across the line.

Effect of Custom's Duty.

It goes without saying that were it not for the existence of the Canadian Customs tariff our railways could not exact from the Canadian shipper higher rates to the east than they do upon merchandise brought in from the United States. Were the Customs duties absent such an attempt would result in annihilating the Canadian manufacturer and producer. It would seem, therefore, that the railways simply take advantage of the situation brought about by the Customs tariff, as there does not appear to be such a difference in the actual cost of carriage of the property to warrant the excessive rates on any other ground. This traffic, whether of United States or Canadian origin, is handled over these same lines in the same cars, hauled by the same locomotives, and the only explanation of the ability of the Canadian shipper to pay the higher rate is the fact that the Customs' tariff protects him in the market against his American rival.

Policies at Variance.

In granting preferential freight rates to shippers of the United States our railways simply to that extent counteract the effect of the Customs' tariff. If the duties have been established by the Government for the protection of Canadian industries then the railway policy appears to be at variance with that of the Government. This phase of the subject will doubtless be very carefully considered by the Commission before its decision is given.

The marked difference in the system of classifying freight in the Eastern States and in Canada for transportation was dwelt upon by the railways in their defense. The Canadian Freight Classification contains nominally ten classes into which the various articles are grouped, while the Official Classification in use on United States lines contains nominally only six classes. This difference in classi-

fication naturally involves a difference in the system of arriving at rates for the various classes, and it was asserted to be an almost hopeless task to attempt to harmonize the discrepancies. While claiming to be unable to effect any change in the system of rate-making from points in United States into Canada the railways alleged that if the United States' classification and system of rate-making were adopted for Canadian traffic it would have a ruinous effect upon their freight revenues. On this account they pleaded that the Railway Commission should maintain status quo.

The difficulties enumerated by the railways may excuse the present unsatisfactory conditions about which complaint has been made, but they are not valid reasons why the injustice should be perpetuated. If the railways are unable to improve the situation by a reduction in their tariffs, the public will look to the Railway Commission to correct the grievance.

Market for Canadian Manufactures.

The importance of the Newfoundland market to Canadian manufacturers is not as widely recognized as it should be. Newfoundland is in the midst of a period of exceptional prosperity. Her exports and imports have increased steadily, her financial position is strong and her Government has been able to show a surplus for each of the last three years.

During the past decade Newfoundland's imports have grown from \$5,986,861 in 1895-96, to \$10,279,293 in 1904-5, while its exports have risen from \$6,638,187 to \$10,669,342 during the same period, an expansion of the total trade from \$12,625,044 to \$21,148,635. During these ten years the imports from Britain have increased in value from \$1,975,754 to \$2,654,908, those from Canada in value from \$2,231,641 to \$4,105,569, and those from the United States in value from \$1,973,721 to \$2,750,114. In the year before last imports from the United States had reached their high-water mark of \$2,991,022, and those from Canada \$3,423,225; but it will be observed that the former have declined nearly \$250,000, while the latter have increased almost \$700,000.

In an analysis of the trade returns of the colony, which are only compiled annually, and are not available until tabled in the colonial legislature in the month of March following the fiscal year which they embrace, United States Consul Cornelius shows that in the great majority of instances the import of commodities from Canada had increased at the expense of the United States, a fact attributable in part to the friction arising out of the fishery dispute between Newfoundland and the United States.

He further states that in dry goods, woollens, cottons, groceries, hardware, machinery, meats, and canned goods, Canada is bettering her position every year. Canada will do well to cultivate the market of her sister colony.

The future of Carrier, Laine & Co.'s machine shops at Levis, P.Q., are now under discussion. The shops are in good condition and fitted with modern machinery. It is reported that the Nova Scotia Steel and Coal Co. are seeking to acquire the shops with the intention of enlarging them and going in for the manufacture of steel rails in them.

The Indiana Machine Manufacturing Co. are going to establish a branch in Canada. The firm has taken an option on some land in Hamilton, and it is expected that they will establish their plant there.

The property holders of Glencoe, Ont., voted to advance \$8,500 to the Hogg Company to enable them to erect and equip a knitting factory.

SALMON CANNING IN BRITISH COLUMBIA

The Fishing Industry which has made the Western Province Famous.

NO part of the British Empire, it has truthfully been said, possesses such latent possibilities as Canada, the Premier colony. Her forests from ocean to ocean contain vast stores of the most valuable merchantable timber; her mountains are huge deposits of minerals, precious and base; her valleys and plains comprise some of the most fertile tracts of country in the world; her bench lands are calculated to produce the finest fruits of the temperate zone; whilst her rivers teem with fish, equal in quality, if not superior, to those of any other country; and the oceans which lave her Eastern and Western shores can supply the requirements of the world for ages to come if operated on proper and conservative lines.

For many years past these sources of wealth have been more or less exploited in the more easterly portion of the Dominion, but it is only within the past forty years that the vast resources of British Columbia have become in any respect fittingly recognized and appreciated, and along all lines most gratifying developments have latterly been made.

Value of the Industry.

In the realization of these valuable national assets the fisheries of British Columbia are destined to take a very prominent position, for, as transportation facilities are improved, the markets for the products of our fisheries will steadily increase.

The waters, salt and fresh, on the Pacific Coast teem with edible fish of superb quality, but amidst this wealth of material the salmon of all kinds claim the pre-eminence. The Fraser, Skeena and Naas Rivers and Rivers Inlet are every year visited by countless millions of these splendid fish, intent upon propagating their species. Their capture and utilization, either as the salted, frozen, preserved or canned product, affords occupation for thousands of our people and profitable investment for large amounts of Canadian capital.

For the purposes named the salmon used are commonly designated, Spring, Sockeyes, Cohoes, Humpbacks and Dog Salmon. The Spring salmon runs in the rivers from February to October, and varies in weight from 12 to 60 or 80 pounds, the average being about 16 pounds.

The Sockeyes come into the Naas and Skeena Rivers

and Rivers Inlet during June and July, and into the Fraser River during July, August, and the early part of September, being closely followed by the Cohoes, Humpbacks and Dog salmon, the latter of which have within the last couple of years been salted and shipped in large quantities to Japan. It may here be interesting to note the rise and growth of the salmon industry on the Pacific Coast, in its relation more especially to British Columbia. In the year 1864 small quantities of salmon were canned on the Columbia and Sacramento Rivers in the United States. The work was done entirely by hand, and the market for the product was very limited. In 1876 the first salmon canneries were erected on the Fraser River by Messrs. Holbrook, Alex. Fwen and a company called the British Columbia Canning Co. In 1877 the first cannery was operated on the Skeena

River, and from that time steady growth has taken place in the volume of the British Columbia output. In 1876 there were packed 9,847 cases of forty-eight one pound cans each, whilst in 1905 1,167,460 cases were accounted for. The record British Columbia year was 1901, when 1,236,156 cases were put up.

Size of Pack.

The enormous quantity of fish represented by these packs will be better appreciated from the fact that on an average twelve salmon are required to fill one case, so that on a pack of 1,000,000 cases not less than 12,000,000 salmon were taken, and over and above this number hun-

dreds of thousands passed up the rivers to the spawning-grounds. Up to the year 1904 all salmon for canning purposes were captured in gill nets, but in the year named the Dominion authorities permitted the use of fixed traps on the Straits of Fuca, and these have been operated with gratifying success since that time. For some years a large salmon canning business has been conducted on Puget Sound, and packs equal to, if not larger than, those of the Fraser River have been obtained there. The American authorities allow cannerymen there to use any means of capture. It is interesting to note that the salmon run is not by any means a regular annual one, but occurs in four year cycles, every fourth year being what is called the "big year," and the intervening ones being smaller in extent, as will be seen from the following figures:



Taking Salmon out of the Trap.

	Fraser River. Cases.	Northern. Cases.	Total. Cases.
1876	9,847	....	9,847
1877	64,387	3,000	67,387
1878	105,101	8,500	113,601
1879	50,490	10,603	61,093
1880	42,155	19,694	61,849
1881	142,516	34,760	177,276
1882	199,104	55,957	255,061
1883	109,701	86,591	196,292
1884	38,437	102,802	141,239
1885	89,617	18,900	108,517
1886	99,177	62,087	161,264
1887	130,088	73,995	204,083
1888	76,616	107,424	184,040
1889	303,875	110,419	414,294
1890	241,889	167,089	408,978
1891	178,954	135,939	314,893
1892	79,715	148,755	228,470
1893	457,797	132,432	590,229
1894	363,967	130,404	494,371
1895	400,368	166,027	566,395
1896	356,984	244,586	601,570

The importance of this branch of the fishing industry to Canada will be apparent when it is noted that during the fishing season not less than 7,000 fishermen and boat pullers are engaged, besides a large number of white helpers, Indian women, and Chinese, who work inside the canneries. In 1905 there were operated 69 canneries, viz., 41 in the Southern and 28 in the Northern Districts. These canneries represented an invested capital in buildings, machinery, plant and tools of over \$3,000,000, and paid out approximately:

To Fishermen	\$1,450,000
" Trap hands	36,000
" Chinese contractors	820,000
" White helpers, including steamboat hands	300,000
For Tinplate, solder, etc.....	1,168,000
" Charcoal and fuel.....	175,000
" Lacquer and benzine.....	120,000
" Salmon boxes	175,000
" Freight and transport to shipping points	70,000
" Incidentals	70,000
Or a total of.....	\$4,384,000



Cannery and Traps at Point Roberts, B. C.

1897	860,459	147,606	1,008,065
1898	266,101	228,060	484,161
1899	480,383	222,054	702,437
1900	316,522	268,891	585,413
1901	990,252	245,904	1,236,156
1902	327,095	298,887	625,982
1903	237,162	236,385	473,547
1904	128,903	336,991	465,894
1905	877,136	290,324	1,167,460

Preservation of Supply.

In order to conserve the fish supply the Canadian Government had enacted and enforced for several years a weekly close season of thirty-six hours, during which time no fishing of any kind was permitted, and it imposed severe penalties for any breaches of this regulation. It was much to be regretted that no similar restrictions were imposed upon the Puget Sound trap owners and fishermen by the United States authorities; and the result of this laxity was apparent in the decreasing runs of salmon from 1902 to 1904. Urgent representations were made to the United States authorities in order to prevent the total extermination of the salmon, and in 1905 it is gratifying to note that a weekly close time of thirty-six hours was instituted on Puget Sound; and it is to be hoped it will be strictly enforced, and produce beneficial results.

Markets for Canned Fish.

Large quantities of frozen, salted and preserved salmon are also shipped from New Westminster and the Skeena River; and in connection with this branch of the industry not less than \$800,000 are annually put into circulation.

The principal foreign markets for the British Columbia products are in the United Kingdom and Australia, where they enter into competition with those of the Columbia River, Puget Sound and Alaska.

Prior to 1904 the salmon pack was almost entirely shipped by sailing vessels round Cape Horn, but latterly all ocean shipments have been made by steamers, which sail monthly from Vancouver via the Suez Canal. To facilitate this business the Ocean Steamship Co., of Liverpool, put on a line of magnificent cargo steamers by which large quantities of general merchandise are carried in addition to the salmon shipments.

Since the commencement of the Japanese-Russian war a considerable demand for Humpbacks and Dog Salmon has sprung up in Japan; and these fish, which, owing to their lighter color, had not been canned, have been salted and shipped in boxes to that country.

With the increased facilities provided by the installation of freezing plants on shore and cold storage on ships and railways a large and steadily increasing demand has

arisen for frozen salmon, and modern plants for handling the business have been erected and operated on the Fraser and Skeena Rivers.

For many years it has been recognized that, in order to perpetuate the supply, not only economic regulations in respect to capture should be enforced, but that artificial propagation on modern and scientific lines, commensurate with the importance of the industry, should be installed and operated. Earnest representations were made from time to time to the Dominion and Provincial authorities in this connection, with the result that five large hatcheries are being maintained by the Dominion Government, one by the Provincial Government of British Columbia, and one on the Nimpkish River by the British Columbia Packers' Association, the most important corporation in British Columbia engaged in the canning industry, the output of fry from which this year will not be less than 160,000,000, all of which will be liberated in lakes and streams frequented by salmon, and will no doubt very largely conduce to the perpetuation of the species.

spawning grounds, all of which works should have a beneficial effect.

In 1905 the late Hon. Raymond Prefontaine instituted a "Fisheries Commission" to take evidence on all matters relating to fishery subjects in British Columbia, and this body is at present engaged on the work.

Cod and Whale Fisheries.

The northern waters, more particularly in the neighborhood of Hecate Straits, are the feeding grounds of enormous numbers of halibut and cod. An American company at present controls the halibut industry, and ships the product in bond to the United States. During 1905 not less than 20,000,000 pounds of halibut were handled from this source, and over \$200,000 were paid out to fishermen, to say nothing of the expenditures upon steamers, boats, gear and supplies. The cod fishing industry has not yet received the attention which it deserves, but indications point out that increased activity will shortly take place in this connection.



Fishing Boats at the Mouth of the Fraser River, B.C.

Difficulties of the Industry.

Notwithstanding the magnitude of the business and the large amount of money invested, owing to the fact that the large runs of salmon only occur quadrennially, the Fraser River salmon packers find that the "lean years" eat up the profits made during the "big year." Whilst the hatcheries were worked to their full capacity in 1905, it was the first year in which they were able to obtain a full supply of ova, and it is hardly to be expected that 1906, 1907 and 1908 will, judging by the results in 1902, 1903 and 1904, yield an output equal to a tithe of the 1905 returns. It will thus be appreciated what a difficult task it will be to build up the "lean years" to anything approaching the volume of the "big years." Owing to the scarcity of Sockeyes on the Fraser River in the "lean years" from 50 to 60 per cent. of the canneries are closed down three years out of four, and it can, therefore, be seen to what disadvantage the cannery is subjected, as their skilled and other help get scattered, thus making the operation of the plants during the "big year" more difficult and expensive, and so destroying the average of their profits.

Large sums of money have also been expended on the removal of obstructions and log jams on the salmon rivers, the construction of fishways at points difficult of ascent by the spawning fish, and the cleaning up of the natural

During 1905 a large whaling station was established on the west coast of Vancouver Island, with the intention of utilizing every part of the material. This so far has met with unqualified success.

The herring fisheries centre mostly along the eastern shores of Vancouver Island, and, though the season of 1905 was not a particularly prolific one, over 2,000 tons of herrings were captured, and \$24,000 were paid to the fishermen. Large quantities of herrings were also taken for use as bait in the halibut fisheries. Oolichans, or candle fish, also run in very large quantities on nearly all the rivers, and are utilized by the Indians.

Oyster culture is now being taken up much more extensively than formerly, and it is expected that ere long British Columbia requirements will be satisfied without having to import supplies. Taken in all, the fishing industries of British Columbia are destined to occupy a much more prominent place in the industrial statistics of Canada than at present, and tend largely to increase our national wealth.

The pork and beef-packing business of J. C. Griffin & Company, of Winnipeg, has been absorbed by American capitalists. The names of those interested in the deal have not been announced.

RATES AND RESERVES IN FIRE INSURANCE

By E. P. HEATON, Manager Insurance Department, C.M.A.

OUR contemporary, "The Chronicle," of Montreal, in its issue of May 11th has an article on the subject of "Rates and Reserves in Fire Insurance," evidently inspired by the terrible catastrophe at San Francisco. It uses the exceptional occurrence to enforce the necessity for large reserves, and we are not at all disposed to challenge the wisdom of the general conclusions arrived at, or quarrel with it in its general attitude on the question.

No two opinions should exist among sane men, whether they are "trained to the business" or are unsophisticated laymen, as to the absolute necessity of reserves large enough to cover possibilities that no human foresight can guard against. By all means let the insurance companies set aside from time to time such amounts as will ultimately allow them to mock at all calamities under a full sense of their ability to meet the most serious reverses. If the guarantee of a company is worth anything to a policyholder to pay for, and it is admitted everywhere and by everybody that he is charged for this feature whether it exists or not, then he should get what he pays for and know that he is doing so. So much for the broad and general view expressed in the article in question.

The Chronicle's View Point.

But concurrence in the general opinion as to "reserves" does not necessarily admit there is only the insurance companies' point of view to be considered. The "Chronicle" is the official organ of the stock fire insurance companies, and it must not be forgotten that the views of this journal must necessarily be influenced by the very close connection that exists between them. While this must naturally be the case, the "Chronicle" should not lend itself to misrepresentation of the attitude of the individual or organization that fails to see eye to eye with it; nor should it, in discussing matters of mutual interest, adopt a tone of supercilious ridicule or assume exclusiveness in the possession of knowledge or experience in insurance matters.

We are led to make these remarks because the article we are specially referring to animadvert upon what it assumes to be the attitude of the Canadian Manufacturers' Association on the subject written upon. It is true that the author has himself got a little mixed between cause and effect, between reserves and profit, but the evident purpose in introducing the name of this Association is to give the impression that we are averse to the companies making profits or setting aside reserves. But let us quote the remarks of our contemporary for the benefit of those who may not have the opportunity of otherwise perusing them:

"Reserves are, therefore, absolutely necessary to the sound life of a fire insurance company, and this is thoroughly understood by those trained to the business. It will not be upset by the public, even when backed by the Manufacturers' Association, in trying to prove that large sums of money have for years been unnecessarily squeezed out of the pockets of the people by the fire insurance companies, as though, forsooth, banks, railways, merchants, nay, manufacturers themselves, did not earn their incomes from the people!"

The first sentence quoted we unhesitatingly commend; indeed, we go further possibly than the "Chronicle" is prepared to agree to, for we do not only endorse the accumulation of large reserves for companies transacting a general business, but we affirm that our Canadian law on the subject requires to be made more rigorous than it is at present to safeguard the insuring public, who are now living in a fool's paradise.

The Canadian Manufacturers' Association has never disputed the right of the insurance companies to earn "their incomes from the people, as do banks, railways, etc."; indeed, it has never made any pronouncement on the subject in any form. But as the "Chronicle" attributes the motive to us, perhaps we might be justified in assuming that it is a case of "whistling to keep up courage," and there may after all be some reason for thinking that the why and wherefore is not so apparent as to be settled with a scornful "forsooth." To relieve our worthy contemporary, and to settle the question once and for all we admit, unhesitatingly and unequivocally, that insurance companies do, and must, earn money for their shareholders out of the people exactly as banks, railways, etc., do. Can this admission be more definite and explicit? But let us go a step further. If the insurance companies were and had been satisfied with the same return on their capital that has been, and is being, paid to shareholders in banks, railways and other public utility companies, all criticism would be effectually disarmed, and the condition that some companies find themselves in as a result of the San Francisco calamity would have been avoided.

Bases of Rates.

According to the "Chronicle," the fire insurance rate must cover: (1) Losses; (2) expenses; (3) reserves, and (4) a "fair margin of profit." We have definitely agreed to No. 3; No. 1 goes without saying; No. 2 must also be concurred in, although something might well be said, if the nature and scope of this article warranted it; concerning the ratio of expense to premiums; No. 4 we have also concurred in, and, as stated in the words of our contemporary, which we have quoted, there would scarcely seem to be room for two opinions. Of course, there is room for two views as to what may really be considered "a fair margin of profit"; there may also be two views as to whether the profit should be on the business transacted or on the capital the shareholders have put up for the security of the policyholders' but we think the Chronicle will be disposed to agree to the conclusion that by profit is meant the return to the shareholders.

It can scarcely be thought to be reasonable that the people, that is, the premium payers, should provide the insurance companies with "reserves" to cover the most unlooked-for calamities; or, in other words, place the shareholders' money in indisputed safety, and at the same time pay to the shareholders more than a fair profit by way of dividend and interest. Yet that is precisely what is being done, and it is apparently what the "Chronicle" wishes to see carried to still further extremes, for it says: "With such lessons it would be sheer madness not to roll up reserves, which cannot be done without the rates do more than merely cover losses and expenses."

In a paper read by the writer before the Toronto Branch of the Association some months ago passing reference was made to the question of dividends paid by certain insurance companies to their shareholders; it could scarcely be expected that the statements then made should be allowed to pass without adverse criticism and evident marks of annoyance; the "Chronicle's" article we are now dealing with is an echo of these sentiments. And now that the demand is made for increased reserves, and, by implication, additional rates to provide the reserves, it is not inappropriate that some consideration be given to two particular aspects of the case:

1st. Have not reserves been curtailed in paying dividends to shareholders in excess of what is fair or reasonable?

2nd. Should the companies expose themselves to losses in excess of an amount their existing reserves can readily provide for?

All question of localizing the discussion is removed because the particular event that has called forth the "Chronicle's" article is the San Francisco disaster.

Of the companies reporting to the Dominion Government's Insurance Department, twenty-seven are directly interested in the San Francisco conflagration and, as the annual statements of these offices are published in the Blue Book, we have a ready means of ascertaining their record in respect to dividends; we can scarcely be accused of invidious distinctions if we give the experience of each of these companies.

The following statement is certainly most interesting, if not startling:

Statement showing actual Dividends paid for the ten years ending 1904, by all Companies interested in the San Francisco conflagration reporting to the Dominion Government.

COMPANY.	1895-1901			1902			1903			1904			1895-1904			Annual Dividend Ratio.
	Average Capital.	Total Dividends.		Capital.	Dividends.		Capital.	Dividends.		Capital.	Dividends.		Average Capital.	Total Dividends.		
Aetna.....	\$ 4,000,000	\$ 5,040,000		\$ 4,000,000	\$ 668,000		\$ 4,000,000	\$ 670,000		\$ 4,000,000	\$ 672,000		\$ 4,000,000	\$ 7,050,000		17.62
Alliance	2,750,000	3,500,000		3,828,125	903,125		3,828,125	931,250		3,828,125	1,164,060		3,558,594	6,498,435		18.23
Atlas	720,000	984,400		720,000	144,000		720,000	150,000		1,320,000	275,000		870,000	1,553,400		17.85
British American	821,428	383,165		1,000,000	59,859		1,000,000	59,859		835,396	44,894		914,206	547,777		6.00
Caledonian	537,500	967,500		537,500	107,500		537,500	129,000		537,500	129,000		537,500	1,333,000		24.80
Commercial Union.....	1,250,000	2,625,000		1,250,000	437,500		1,250,000	500,000		1,250,000	562,500		1,250,000	4,195,000		33.00
Connecticut	1,000,000	700,000		1,000,000	100,000		1,000,000	100,000		1,000,000	120,000		1,000,000	1,020,000		10.20
Hartford	1,250,000	2,650,000		1,250,000	400,000		1,250,000	437,500		1,250,000	507,325		1,250,000	3,994,825		31.95
Insur. Co. of N. America ..	3,000,000	2,520,000		3,000,000	360,000		3,000,000	360,000		3,000,000	360,000		3,000,000	3,600,000		12.00
Liverpool, London & Globe	1,228,200	7,614,840		1,228,200	1,105,380		1,228,200	1,105,380		1,228,200	1,105,380		1,228,200	10,930,980		81.80
London & Lancashire.....	1,063,750	1,715,175		1,112,435	312,040		1,112,435	312,040		1,138,500	312,040		1,106,780	2,651,295		23.95
London	2,241,375	3,337,925		2,241,375	448,275		2,241,375	448,275		2,241,375	448,275		2,241,375	4,682,750		20.90
N. B. & Mercantile	3,437,500	5,698,750		3,437,500	948,750		3,437,500	948,750		3,437,500	948,750		3,437,500	8,545,000		24.27
Northern	1,500,000	3,105,000		1,500,000	480,000		1,500,000	480,000		1,500,000	480,000		1,500,000	4,545,000		30.30
Norwich Union.....	680,000	1,842,500		660,000	220,000		660,000	275,000		660,000	275,000		660,000	2,612,500		59.58
Phoenix of Brooklyn	1,000,000	700,000		1,000,000	100,000		1,000,000	100,000		1,000,000	100,000		1,000,000	1,000,000		10.00
" " London	1,334,400	3,293,780		1,334,400	470,540		1,334,400	470,540		1,334,400	470,540		1,334,400	4,705,400		35.25
" " Hartford	2,000,000	1,980,000		2,000,000	240,000		2,000,000	240,000		2,000,000	282,000		2,000,000	2,742,000		13.71
Queen.....	500,000	600,000		500,000	100,000		500,000	100,000		1,000,000	600,000		625,006	1,400,000		22.40
Royal	1,878,510	8,204,470		1,959,435	1,240,975		1,959,435	1,240,975		1,959,435	1,240,975		1,993,204	11,927,395		61.50
Scottish Union	1,500,000	1,762,500		1,500,000	187,500		1,500,000	187,500		1,500,000	262,500		1,500,000	2,400,000		16.00
Sun	600,000	3,460,000		600,000	510,000		600,000	540,000		600,000	570,000		600,000	5,080,000		84.67
Union	900,000	1,366,875		900,000	84,375		900,000	168,750		900,000	168,750		900,000	1,788,750		19.87
Western	1,226,984	732,626		1,970,733	116,574		1,991,329	118,175		1,464,861	89,987		1,663,477	1,057,362		6.35
Law Union & Crown (1) ..	1,866,800	1,909,495		1,866,800	279,965		1,866,800	280,210		1,866,800	280,245		1,866,800	2,749,915		14.73
Home	3,000,000	2,940,000		3,000,000	420,000		3,000,000	420,000		3,000,000	420,000		3,000,000	4,200,000		14.00
German American .. (3) ..	1,500,000	2,625,000		1,500,000	375,000		1,500,000	375,000		1,500,000	375,000		1,500,000	3,750,000		25.00
Totals	\$42,766,447	\$72,259,001		\$44,896,503	\$10,819,358		\$44,917,099	\$11,148,204		\$45,352,092	\$12,264,221		\$44,483,036	\$106,490,784		23.94

(1) Estimated to 1897. (2) Estimated to 1901. (3) Estimated to 1903.

Apart from the rather remarkable difference that is here shown between the low average during the decade of 6 per cent. and the high average of 84.67 per cent per annum, that which will naturally strike the ordinary reader is that in the ten years there has been paid out to the shareholders in these twenty-seven companies nearly two and one-half times their entire combined capital, a record that, we venture to think, is not equalled by any combination of banks, railways or other corporate interests serving the public in any utilitarian capacity.

The loss sustained by these twenty-seven companies in San Francisco, as reported to the Insurance Superintendent of New York State, is \$54,500,148 (a total amount that from more recent admissions of the companies themselves is much under the mark); but it will be noticed from a further statement that is presented that the same companies possessed aggregate surplus (i.e., above capital and legal reserves) of \$119,341,119. If it should be thought by those most competent to judge that these surpluses were inadequate or being adequate, now require to be restored after depletion for the payment of the Frisco claims, the question that stands out in conspicuous prominence is, Why should the assured be victimized by the impost of additional rates?

If the twenty-seven companies whose records we have given had been satisfied with dividends equal to the average paid by the banks or railroads of even, say, 10 per cent. per

annum, the companies would have been in possession of additional funds, without considering accumulated or compound interest, of over \$62,000,000, or more than enough to pay the entire San Francisco losses sustained by these companies! Of course, the shareholders would not have been so satisfied and complacent; but our contemporary ranks insurance companies with banks and railroads, and there does not seem to be any legitimate reason why they should not be satisfied with the maximum dividends paid by those commercial enterprises.

Relation of Risks to Reserves.

But the further question that arises in considering this subject is—

Should the companies expose themselves to losses exceeding the reserves on hand?

This opens up a question of great importance that the "trained insurance men" referred to by the "Chronicle," it is to be presumed, are alone capable of satisfactorily answering. Even a presumptuous laymen may, however, be permitted to put together facts of common import and make natural deductions therefrom.

In order to appreciate the exact position of the companies in respect to their reserves the following statement has been prepared. The same companies are dealt with as in the preceding statement:

Assets

Statement showing "net surplus" of the 27 companies reporting to the Dominion Government interested in the San Francisco conflagration, and their reported loss thereunder:—

	Capital.	Funds.	Liabilities.	Net Surplus.	San Francisco Conflagration.
Aetna	\$4,000,000	\$12,815,296	\$ 5,952,312	\$ 6,862,984	\$ 2,700,000
Alliance	3,828,125	15,911,640	3,865,470	12,046,170	1,386,666
Atlas	870,000	6,671,425	5,134,995	1,536,430	1,250,000
British American	848,226	1,276,918	1,682,758	— 405,840	260,000
Caledonian	537,500	2,952,665	1,678,725	1,273,940	1,193,482
Com. Union	1,250,000	14,481,685	7,818,065	6,663,620	1,300,000
Connecticut	1,000,000	4,813,619	3,119,646	1,693,972	1,775,000
Hartford	1,250,000	16,811,926	11,687,106	5,124,820	5,750,000
Insurance Company, N.A. ..	3,000,000	9,951,989	6,464,752	3,487,236	2,000,000
L. & L. & G.	1,228,200	17,827,395	9,151,035	8,676,360	3,500,000
London & Lancashire	1,138,500	10,785,895	6,242,360	4,543,535	3,500,000
London	2,241,375	7,089,860	2,250,345	4,839,515	4,000,000
N. B. & M.	3,437,500	17,149,320	8,526,950	8,622,370	3,000,000
Northern	1,500,000	11,685,550	5,776,585	5,908,965	2,000,000
Norwich Union	660,000	6,960,645	4,708,235	2,252,410	1,200,000
Phoenix, Brooklyn	1,000,000	7,859,128	5,622,349	2,236,779	1,750,000
" London	1,334,400	8,408,820	5,461,200	2,947,620	1,600,000
" Hartford	2,000,000	6,140,630	3,759,691	2,380,939	1,600,000
Queen	1,000,000	5,841,016	3,118,366	2,722,650	1,500,000
Royal	1,959,435	22,114,055	12,749,005	9,365,050	3,825,000
Scottish Union	1,500,000	4,099,625	2,503,030	1,596,595	1,250,000
Sun	600,000	13,237,625	5,574,020	7,663,605	2,000,000
Union	900,000	4,230,535	2,876,380	1,354,155	1,500,000
Western	1,500,000	2,000,975	2,427,826	— 426,851	460,000
Law Union & Crown	1,866,800	2,020,470	809,555	1,210,915	1,000,000
Home	3,000,000	18,239,052	9,518,551	8,720,501	1,200,000
German American	1,500,000	12,552,520	6,109,845	6,442,674	2,000,000
				<u>\$119,341,119</u>	<u>\$54,500,148</u>

N.B.—United States and Canadian Companies' figures are as at 31st December, 1905; British Companies' as at 31st December, 1904.

To enable the ordinary reader to understand the value of this statement it is to be noted that the term, "net surplus," means the companies' assets (excluding capital) after providing for the re-insurance reserve and outstanding liabilities. By the term, re-insurance reserve, is meant the

amount necessary to run off the liability of the company under policies issued and not matured, and in making this calculation no provision is made for the extraordinary and unlooked for circumstance; the "net surplus" is, of course, for the purpose of meeting these untoward events. Ac-

cording to United States law the capital is an equal liability with the re-insurance reserve and all other liabilities, and if the net surplus is not sufficient at the time of a disaster or at the time of an accounting to leave the capital unimpaired, the company must at once make good such impairment or retire from business. In Canada, on the other hand, the capital is an asset, and a further call for funds need not be made as long as any portion of the capital is left. The difference in the practice of the two countries in this respect is very marked, and the provision of our own Act is sadly deficient.

Impairment of Capital.

A concrete illustration will emphasize this difference. The Aetna, for example, the first company on the list, had a surplus on December 31, 1905, of \$5,862,984, exclusive of all liabilities and capital. It loses \$2,700,000 by the San Francisco conflagration, but there is still left over \$4,000,000 of a "net surplus," and the strength of the company is not impaired in any way by this particular disaster. The Connecticut, on the other hand, had a net surplus of \$1,693,972, and it loses in San Francisco \$1,775,000. Consequently, to restore the prestige of the company it has already arranged to call in additional funds, not only to make good the impairment, but also to provide security for its policy-holders. The same may be said of the Hartford, whose figures are shown in the statement.

The Canadian companies, whose figures are given, show an impairment of capital at December 31, 1905, and the minus mark before the figures in the net surplus column indicates the amount of such impairment.

The British companies, as it is well known, do not prepare their statements either as the United States or the Canadian companies do, and it has been necessary for us to analyze their figures to establish a basis for the calculation of their re-insurance reserve to bring them into harmony with the practice pursued by the other companies, whose figures are given. To explain to "the trained insurance men" how the calculation is arrived at we have only to say that the liabilities of the British companies are made up of an arbitrary computation of 70 per cent. of the annual revenue, plus all other outstanding liabilities. It is open to question whether 70 per cent. is more or less than the actual figure necessary to provide the reserve, but it is not more than necessary to bring the accounts into such a condition that they can compare on an even basis with the statements of the United States or Canadian offices. The re-insurance reserve of the companies organized in New York State is about 85 per cent. of the annual premiums; all other State companies, 83 per cent, and of the American business of foreign companies, 80 per cent. As some of the British companies derive one-half their revenue from the United States, and as the basis of their reserve in the United States is 80 per cent. of the annual premiums, it can scarcely be regarded as unfair to charge them, for the purpose of comparison, with a ratio of 70 per cent. of their world business.

British Companies Large Reserves.

It will be noted that, on the whole, the British offices show a remarkable strength, and are able to meet the San Francisco liabilities with but little loss to their efficiency or prestige. There are, of course, exceptions to the rule, and such exceptions will be readily noted in perusing the statement above given.

There are naturally two important considerations that arise in connection with the study of these figures. The first is that on the whole the British companies have built up tremendous reserves and have paid tremendous dividends. Is it not a fair conclusion that larger premiums than

necessary must have been squeezed out of the policy-holders of the companies which show this extraordinary result?

The other is that some of the companies have apparently been injudicious in gathering together a liability in San Francisco beyond that which was prudent in view of their existing reserves. It is not at all necessary that we should illustrate this point by reference to any individual case, the figures we have quoted are for the perusal of those who may be interested, and they surely convey lessons that do not require further emphasizing.

Finally, if imprudent underwriting has led some companies to assume too large a liability in a city that was marked for conflagration probabilities, is that a sufficiently good reason for demanding additional rates, that their depleted reserves may be restored or their dividends to shareholders maintained at high water mark?

A Word to Manufacturers Altering, Enlarging or Rebuilding Their Premises.

The high rates of fire insurance now in force throughout the Dominion make it very necessary that advantage should be taken of every opportunity to so alter or build as to obtain the benefit of every allowance made by the insurance companies for favorable features of construction or distribution of risk. Evidence is not lacking that architects rarely, if every, appreciate the bearing of the insurance rate in planning the details of a building; economy in cost of construction is the absorbing feature while others of equal, if not greater importance are completely ignored. Moreover we fear many architects utterly fail to understand themselves what a standard building is.

A concrete illustration will best enforce the purpose of this article. On a recent occasion the writer was requested by a member of the Association to inspect a new building with a view to advising on the insurance situation. The owner intimated with some degree of satisfaction that the architects had been commissioned to erect, and so far as he knew had erected, a perfect specimen of a "mill construction" building. The most casual glance on entering the main factory door revealed such stupid and glaring inherent defects as to prove beyond all peradventure that the architects had either wilfully disregarded instructions or had not the faintest idea of what a "mill construction" building was.

Unfortunately the building was nearing completion and it was almost impossible to remedy the mistakes that had been made. A superficial calculation showed that this assured would be called upon to pay a yearly addition to his insurance bill of about six hundred dollars, because of the stupidity of his architects, and the most aggravating part of all is to be found in the fact that a proper construction would not have added to the cost more than one year's additional premiums that he will now be called upon to bear.

The time to catch defects is before the plans are finally approved, not when the contractor's work is practically completed.

Every manufacturer contemplating an enlargement of premises or the rebuilding of any part thereof, or the erection of entirely new buildings on another site should, in his own interest, have the plans passed upon by some one capable of advising on them in the light of present day insurance requirements; this is work that requires special technical training and experience, and the omission to take the precautionary measure may be found, as in the case briefly cited, to form a costly error.

INTERNATIONAL COMPARISON OF INDUSTRIAL EFFICIENCY.

OUR manufacturers should read carefully the work just issued by Dr. Shadwell from the press of Longmans, Green & Co., entitled "Industrial Efficiency: A Comparative Study of Industrial Life in England, Germany and America." They will find it one of the few noteworthy books of its class appearing during the last few years.

In Canada, as in all young countries, one of the most pressing industrial needs is for skilled help. In this connection it is difficult to understand the curiously mistaken and harmful attitude of some of our official leaders of organized labor in denying the demand for trained mechanics. Organized labor, however, is beginning to show an appreciation of actual conditions by moving for more thorough technical education.

In the present work Dr. Shadwell points out that industrial efficiency is broader than a mere question of education. It depends on a people's habits and on their general history. Under the head of habits we are reminded of the false preaching of the gospel of ease. Amateur philanthropists often blindly hold up this gospel as the ideal for our workingman, that is, the ideal of doing as little as possible—an ideal which promises slow extinction for any people and any industry. Very curious is another fact that higher wages often mean reduced efficiency for a time, until the workman grows accustomed to his new scale. Nowadays would-be philanthropists should preach the ideal of honest work—an ideal which is good for both Jack and his master. Rarely, indeed, does one hear good, robust old songs heard twenty or forty years ago, such as—

"Work, boys, work, and be content," or

"Then never sit down,
With a tear or a frown,
But paddle your own canoe."

We need to hear to-day the gospel of work along with the gospel of ease, if not often in place of it.

On general factory conditions some of the author's conclusions are most instructive. English factory laws, on the whole, are, he considers, more stringent and less carefully adjusted than the German, and in some respects they exercise a prejudicial effect on the development of industry. This last result is important to note when framing factory legislation. In the United States factory laws are regarded as elementary and very imperfectly observed, though they vary greatly from State to State. The author recognizes, further, that a reduction in the hours of labor may mean diminished output unless work is carried on with greater intensity. The problem, indeed, is always new, to what extent machinery working at a high speed can be made to recoup capital for the diminished efficiency of employees through shorter hours and for other reasons.

The author criticizes adversely the present wage system, though he offers no cure-all. Yet he believes its defects might be overcome to some extent by some form of product-sharing. Our wage system is based on division of labor and division of responsibility. The employer risks his all for a profit; the employee organizes his unions and gets the highest possible wage. He does not trouble his head as to whether profits can be made on the basis of the wage scale that he demands. He leaves that for the employer to fight out. In other words, the employee wants, and gets, a definite return paid in the present; the employer gets an indefinite return in the future in the form of profits. The risk involved in profits must be paid for, for which

reason when once made, profits are usually much higher than wages. Looked at in this way, our present wages system offers certainly many advantages. Its weakness is in not paying labor accurately according to effort and skill. Labor unions in striving for a uniform wage will find this a hard bone to wrestle with.

The author also directs attention to the injurious influence of gambling in its various forms in the three countries under review. In England and the United States, he believes, that gambling is a threatening blot on large sections of the people, against which the German lottery makes a comparatively insignificant comparison.

On the whole, from a study of Dr. Shadwell's two thoughtful volumes one gets a broad and instructive survey of the whole problem of industrial efficiency. We are shown that not all the virtues are to be found unalloyed in any one country. Slavish imitation in Germany cannot always match English invention, when English inventive powers are really stimulated. American mechanical ingenuity and hurry are often discounted by Old World thoroughness. Moreover, the waning influence of the Church, particularly in America, and the rapid disintegration of the home, darken the outlook for the future; for the influence of Christianity and of the home are necessary safeguards for the individual as well as for industrial society as a whole.

COMMERCIAL GEOGRAPHY.

ALL countries are studying more carefully the product of distant parts of the earth, and the services of the industrial chemist are being called for more frequently in connection with the utilization of new materials. Our schools and colleges are beginning to take note of the fact and are leaving the old way of studying geography. It is well that they are. Geography should be, and rightly regarded is, intensely practical and useful. A number of new books reflecting this point of view have appeared during the last few years under such title as "Commercial Geography" or "Geography of Commerce." A recent volume under the latter title by Professor Spencer Trotter, published by the Macmillans (Toronto and New York) is a good example. Other volumes to treat of commercial products, history of commerce, etc., are to follow and should make a capital series.

All such books have the country of their publication particularly in view. We would like soon to see a commercial geography of our own country written in the simplest and most direct style and by a thorough master of the subject. The matter is of such importance that it would well repay the Dominion and Provincial Governments to co-operate towards this end.

Professor Trotter's book is in some respects an admirable model. It is replete with all kinds of interesting entries. All continents are reviewed and special remarks made as to the leading countries. Canada is let off with nine, out of 410 pages, though it is interesting to note that she ranks ninth in the total of imports and exports of the world.

The Moose Jaw Machine Works, Limited, have taken over the business of Garrod and Caswell, machinists, and Williamson Clarke, blacksmith. The new company have a capital of \$50,000, and intend to do a general machine manufacturing business.

CANADIAN BOARDS OF TRADE

CONVENTION OF WESTERN BOARDS.

On June 13th, the Associated Boards of Trade of Western Canada assembled at Edmonton in their third annual convention. Almost all the Boards of Trade in the two new provinces were represented. The vice-president, Mr. R. J. Hutchings, of Calgary, who occupied the chair, in opening the convention, spoke of the progress that had been made since the last convention. The granting of autonomy to the two old territories made necessary a change of name in their body. Regarding the advantages of united effort, Mr. Hutchings said:—

"It appears to be almost impossible to estimate the value of an annual convention of this nature, representing as it does the business interests of this vast country. It must necessarily establish a strong bond of fellowship between the various towns and cities represented and materially assist us to acquire a broader, more intelligent and more systematic view of the commercial and economical conditions as they exist throughout the country, and I feel confident that the result of the deliberations of this body from year to year will have a very material effect in establishing a good, sound commercial and social life in our fair Canadian West."

Mr. A. E. Boyle, of Regina, introduced a resolution favoring the abolition of inland revenue duties on denatured alcohol. The mover spoke of the great importance of securing cheap fuel and motive power for industrial enterprises. He cited the case of the United States where Congress has recently removed the duty on this commodity.

"The taxes at the present time really amount to about \$3 per imperial gallon," explained Mr. Boyle, "whereas alcohol can be manufactured from grain at a cost of about 25c. per gallon, and diluted with wood alcohol (made from sawdust) costing about 7 cents per gallon to produce. At this cost of production denatured alcohol can be economically used as fuel for the production of heat and power, whereas under the present taxes its use is prevented except in a very limited way. By removing this tax we can have at our doors the most economical fuel that it is possible to have in Western Canada."

Another speaker cited Germany, the centre of modern scientific research. For years the best minds of that country had been looking into the question of cheap power. They had investigated the briquette (made of peat, sawdust, etc.), and they found it unsatisfactory. Finally someone suggested alcohol, and various experiments were accordingly made. It was found that the much despised potato will produce great quantities of alcohol, and a very profitable market for the potatoes of the German farmer has accordingly been found. By intensive cultivation he can grow 300 to 400 bushels of potatoes per acre, which is double the Canadian production.

For the use of this alcohol Germany has evolved the most economical motor in existence, and cheap power has been attained thereby.

After some discussion the resolution was adopted.

Codification of the commercial law of the two provinces was urged in a resolution. The Federal Government was asked to enforce the law compelling the use of Canadian standards of weights and measures. It was pointed out that the use in the United States of the wine gallon gave their manufacturers an advantage over Canadians who used the imperial measure, since in quotations few people noticed the difference.

The embargo on Canadian cattle was the subject of much argument. The members felt that this was a protective measure on the part of Great Britain, and as such could not be objected to. The real wrong consisted in continuing the suggestion that Canadian cattle suffered from contagious diseases. The speakers held that the British Government in all fairness, should state its position and give Canada a chance to prove that there was no disease in its cattle.

The metric system was advocated after considerable discussion, and the resolution in favor of it was adopted only after an amendment to it had been fought out and defeated.

The entrance of the J. J. Hill lines into the West was strongly advocated, and a resolution to that effect was carried unanimously.

Among the numerous other matters which came up for discussion were the question of good roads, additional postal service, municipal bonusing and transportation.

The officers elected for the coming year were as follows: President, R. J. Hutchings, Calgary; First Vice-President, Thos. Copland, Saskatoon; Second Vice-President, P. McCara, Regina; Secretary, F. T. Fisher, Edmonton.

Quebec.

At its June meeting the Quebec Board of Trade discussed improvements which were necessary in the St. Lawrence route. The St. Lawrence at Crane Island flats is too shallow at low tide to permit of safe navigation. Many complaints have been made by captains of the dangerous condition of the course, and the board felt that some energetic action should be taken in the matter. A dredge has been bought by the Federal Government for this service, but it met with an accident on the river. In view of the pressing necessity of the work it was decided that the Secretary of the Board should write to the Minister of Marine setting forth the feeling of the Board on the matter, and asking that immediate steps be taken to remedy this obstacle to navigation.

President Amyot also introduced the subject of the control of the Quebec Bridge, and it was decided to communicate with the Government on the question.

The street car system and street pavements came in for strong criticism. Such matters it was pointed out were being neglected by the press and the city council, and it devolved on the Board of Trade to make such representations to the councils as would bring about some reforms.

Insurance rates were also dealt with, and the complaint was made that increased rates were being levied by the companies. This was attributed to the disorganized condition of the fire brigade and the bad state of the water main. Improvements in both respects were promised by the mayor.

Kingston.

The recently reorganized Board of Trade in Kingston should prove of very great advantage to that city. Kingston's position at the juncture of the St. Lawrence, Rideau and Lake Ontario gives it great possibilities as a shipping point. In some respects the most has not been made of these chances and a Board of Trade, active to conserve the shipping of the port, and ready to anticipate the requirements of such a place will do much to increase the prosperity of the city. The new board is composed of men who command the confidence of the citizens, and the success of their efforts seem assured.

MANUFACTURING NOTES.

An Improved Lamp.

The construction of a new electric lamp has been perfected by an Austrian chemist. It is known as the Syrius lamp. As is well known, incandescent gaslight is cheaper than electric light, because the filament wires of the latter are very expensive and the glass bulbs soon wear out. Dr. Kuzel has now invented a new substitute for the glow-thread by forming out of common and cheap metals and metalloids colloids in a plastic mass, which can be handled like clay, and which, when dry, become hard as stone. Out of this mass very thin wire threads are then shaped, which are of uniform thickness and of great homogeneity. These two characteristics are of great value in the technics of incandescent lamps. The Kuzel or Syrius lamp hardly needs one-quarter of the electric current which the ordinary lamp with a filament wire requires. Experiments, it is asserted, have shown that the lamp can burn for thirty-five hundred hours at a stretch. Another advantage is that the intensity of light of the new lamp always remains the same, the lamp bulb never becoming blackened, as is now the case. The new lamp, it is said, will be put on the market next autumn.

An Experimental Coal Mine.

The authorities of Birmingham University have recently opened on the university grounds an experimental coal mine, occupying nearly an acre of ground. The purpose is to give practical instruction to students in all the problems and operations of coal mining. They are exercised in underground surveying, the connection of surface with underground surveys, the testing of ventilation, the measurement of air volumes and velocities, the friction of air currents, the various methods of breaking coal, and the management of different kinds of drills and cutting machines. The completion of this artificial mine has been awaited with interest, and it is expected to prove very valuable in teaching the science of mining.

Making Aluminum Paper.

Aluminum paper is now manufactured in Germany, and recommended as a substitute for tin foil. The paper used is a sort of artificial parchment obtained through the action of sulphuric acid upon ordinary paper. The sheets are spread out and covered upon one side with a thin coating of a solution of rosin in alcohol or ether. Evaporation is hastened by means of a current of air, and the paper is then warmed until the rosin has again become soft. Then powdered aluminum is sprinkled upon it, and the paper subjected to strong pressure to fasten the powder thereon.

Carbonic Acid as a Cause of Rust.

In view of the important place given to preservative coatings in the programmes of engineering associations and the divergent views on the causes and prevention of rust, interest attaches to the data presented by Gerald Moody of the Central Technical College, at a recent meeting of the Chemical Society in London. The accepted theory has been that the presence of oxygen and moisture would always

cause rust, and the view of some chemists that carbonic acid played an important part in the reaction has been considered disproved by experiments carried on by Dunstan, Jowett and Goulding.

Mr. Moody, as reported by the London "Engineer," held that minute traces of carbonic acid are sufficient to set up atmospheric corrosion, and he entered upon a series of experiments to justify his opinion. In these experiments extraordinary precautions were taken to exclude the minutest traces of carbonic acid. His plan was to keep a sample of highly polished iron in a few drops of distilled water for prolonged periods, and to draw over it a continuous stream of air freed from carbonic acid by passage over caustic potash and soda lime. In some instances three weeks were expended in purging the apparatus of carbonic acid alone before the water was allowed to reach the iron, and for six weeks the pure air passed over the sample. At the end of this time the iron was as bright as when the experiment began. But, on the other hand, when air containing the normal quantity of carbonic acid was drawn over the sample, in six hours the bright surface was tarnished, and in 72 hours, during which time, about 16 litres of air passed over it, "the whole surface of the metal was corroded, and a considerable quantity of red rust had collected." The question presented by these experiments to the manufacturer of preservative coatings is how to exclude or neutralize the action of the carbonic acid carried by the atmosphere or by moisture.

Two correspondents of the "Engineer" comment on the above to the effect that there must be moisture to cause rust. One says that the experiments of the late Prof. Grace Calvert in 1869 to 1871 showed that with dry carbonic acid there was no oxidation, and that the most rapid corrosion took place when the iron was exposed to "damp oxygen and carbonic acid." The other correspondent says that in all cases of rust water as well as carbonic acid and oxygen must be present; that no oxidation can take place without water, though it has not been ascertained how much moisture must be present or the precise part it plays.—Iron Age.

Apprentices Needed.

Every student of the unemployed problem in the big cities is aware that one of the most potent factors in the creation of the army of the unemployed is the decay of the apprenticeship system. Boys on leaving school take positions as messengers, cart drivers, errand boys, etc., at good wages for boys, but at the age of twenty they go to swell the vast stream of unskilled labor. Even when a boy is admitted into an industrial concern he is rarely able to get an all-round training, even in cases where he is admitted as a wage-earning apprentice. The old system of indentured apprentices is practically obsolete, and even in the rare cases where a parent is willing to sacrifice gain for the future of his boy, the employer is reluctant or unable to provide the necessary facilities for the proper training of the lad in his trade. The attempt of the Printers' Guild to restore the apprenticeship system in printing offices will be watched with interest. A committee of the Canadian Press Association also has the same matter in hand, and it is hoped that some satisfactory plan will be provided that will furnish competent workmen for the "Art Preservative." Successful in this, the apprenticeship system is likely to be revived in other trades.—St. Catharines Star-Journal.

Canada's Prosperity.

"The American Review of Reviews," in discussing the future of Canada, economically, says:—"Sir Wilfrid Laurier's happy phrase, 'The nineteenth century belonged to the United States, the twentieth will belong to Canada,' appears to be rapidly spreading from the oratory of Canadian political leaders into the convictions of the Canadian people. The economic and industrial development of the Dominion during the fiscal year 1905 has been truly wonderful, and Canadians themselves are beginning to realize it. With the creation of the new provinces in the North-West—Alberta and Saskatchewan—rich beyond description in agricultural and mineral possibilities, and the launching of several new trans-continental railroad enterprises, the economic life of our neighbors to the north has been enriched and broadened. Politically, they have recently made several important advances in the direction of national independence. By the departure (on May 1st) of the last British soldier from Esquimaux, British Columbia, the Dominion assumes absolute, undivided control of all the military posts within her borders. The strong attitude maintained by the Government of Newfoundland—the other British North American colony—in the matter of the alleged violation of fishing regulations by Americans also indicates the dawning national consciousness. Canadian-American trade, it is gratifying to note, is increasing by leaps and bounds. Our trade with the Dominion in 1895 aggregated—according to the official figures—\$89,429,090. Last year the total was only a shade below \$203,000,000. The Canadian North-West is making giant strides in production, trade, and population. When James J. Hill has built his projected railroad line from Winnipeg to the Pacific (he promises it very soon), that vast grain-raising, mineral bearing region will be traversed by four great roads, the Hill line, the Canadian Pacific, the Canadian Northern, and the Grand Trunk Pacific. These will give a mighty impulse to the productive activities of the Dominion and—for many geographical and climatic reasons—of our own cities, Duluth, St. Paul, Minneapolis, which will also become foci of the transportation systems."

Cement Largely Used in Europe.

Cement probably has no applications abroad which are not familiar to American builders, although in some classes of work these applications are much more common in Europe than in the United States and Canada. In the South of France particularly there are few brick or frame structures, and, although important buildings are constructed of cut stone, the large majority have walls of laid up small and broken stones carefully bound together and upon the face of which is laid a cement veneer. Armed cement construction is becoming very common, and great quantities are taken up for the manufacture of pipe and paving blocks. Huge stone slabs suitable for sidewalk construction are seldom encountered in France, and asphalt walks are equally rare. The popular material is a cement block, which is cheap, durable and satisfactory. These blocks are made in a variety of shapes and colors, and in their more expensive forms are much used in interior work.

The Dust Nuisance.

In the effort to allay the dust nuisance the following three methods have been worked satisfactorily, namely, oiling, watering with deliquescent salts, and tarring. The first consists in spreading upon a well-swept road a heavy oil obtained from distilled petroleum. During a dry and warm period the spreading process is done with a brush.

These oils are obtained in California, Galicia, and Baku, and cost from \$5 to \$6 a barrel.

Watering with such salts as chloride of calcium would give appreciable results were it not for the ophthalmic effect on the eyes. Products of this kind are rapidite, westrumite, apulvite, baselite, odocreol, and pulveranto. At the automobile exhibition in Paris a block of macadam could be seen amalgamated with rapidite, giving to the mass an idea of great compactness.

For tarring the product used is a coal tar, the product of gas works. It is black and viscous and its density varies from 1.10 to 1.25. It can be applied hot or cold. Its boiling point varies between 70° and 80°, and thereafter it is impossible to raise it to a higher temperature. The spreading with watering pots must be done during a warm and dry period. The road, which has been thoroughly cleaned before the application of the tar, must then be carefully and gently brushed and traffic must be suspended over it for at least twenty-four hours. The quality of tar preferable for lasting use is the product from gas made by carburated water.

It is said that these three antidust processes have given general satisfaction, and the numerous trials made under the supervision of the league in Switzerland demonstrate that the tar obtained as above is the most efficacious of anything heretofore tried. The league urges frequent and substantial demonstrations of dust-settling processes, and estimates the cost to be but nominal. The French Government, after a four-years' trial of the tarring method, have obtained satisfactory results fully justifying the expense of from 2½ to 3 cents per square yard. The annual economy on the wear and tear is found to be about 2 cents a square yard, and for watering, 1 cent a square yard, so that the process of tarring is of no expense while its benefits are evident.—U. S. Consular Reports.

BOOKLETS AND CATALOGUES.

B. Greening Wire Co., Limited, Hamilton, Canada. An illustrated booklet showing the uses of wire bonding in cement construction.

Hamilton Motor Works, Limited, Hamilton, Canada. A booklet describing motor boats made by this firm, with their prices; illustrated.

Paris Plow Co., Limited, Paris, Canada. A booklet showing the place of manufacture and the uses of the Success Manure Spreader. It is illustrated throughout.

George White and Sons Company, Limited, London, Canada. An illustrated booklet descriptive of the White engines for threshing machines.

S. F. McKinnon & Co., Limited, Toronto. Spring catalogue of 1906 cloaks and skirts. The booklet is illustrated throughout.

The Smart-Turner Machine Co., Limited, Hamilton, have issued a catalogue, No. 6, containing an illustrated description of the pumps manufactured by that company. The booklet is well designed and printed.

Wants Position.

A correspondent, with experience as manager of a manufacturing establishment, wants another position in the same capacity. He understands the interior management of factories, is a good handler of employees, and can calculate costs of production, etc. He is thoroughly familiar with factory work of every kind. Manufacturers wishing such a man will be placed in communication with him through this office.

AMONG THE INDUSTRIES

A stove factory is the latest acquisition to Stratford's manufacturing establishments.

Medicine Hat has a proposition before it for the erection of a woolen mill.

The new plant of the Dominion pulp mill has been put in operation at Chatham, N.B.

The Peterborough Show Case Co. intend to erect a new factory, with increased manufacturing facilities.

The mill at Lake Saccacoma, P.Q., for cutting spool wood, was destroyed by fire during the month.

J. J. Turner & Sons, of Peterborough, Ont., have been granted a fixed assessment for ten years at \$6,000.

The W. R. Brock, Co., Limited, of Toronto, and Montreal, will erect a three-storey warehouse in Calgary.

The Doty Biscuit Company is negotiating with Medicine Hat with a view to establishing their factory there.

A sand lime brick industry will be established at Brantford, Ont. Necessary machinery will cost over \$30,000.

The Harris Abattoir Co., of Toronto, will build a refrigerating plant in Sydney, B.C. The proposed building will be a model of its kind.

The Dominion Stove and Heater Co. have located at Brockville. They will erect a plant either there or at Peterborough.

The Dominion Bridge Company, of Montreal, have purchased a site at Winnipeg, on which they will erect a large plant.

The Adams Wagon Works, of Brantford, will be enlarged with an extensive addition to the factory buildings this summer.

The Mooney Biscuit and Candy Company, Limited, of Stratford, are erecting a new building which will double the capacity of the plant.

In the fierce wind storm which passed over Western Ontario on June 8th the International Harvester Co.'s factory roof was torn off. The loss amounted to about \$12,000.

The Hamilton Steel and Iron Company, Limited, has decided to erect a second blast furnace with a capacity of four hundred tons per day.

The Canadian Dredge Manufacturing Company has been incorporated with a capital of half a million dollars. The headquarters will be at Newcastle.

The Canadian Mine and Smelter Supply Co., will erect a factory for the manufacture of mining machinery, in Vancouver, B.C. A site has been already secured.

The ratepayers of Seaforth, Ont., have voted to loan the W. H. Willis Shoe Company ten thousand dollars in consideration of their establishing a shoe factory in that town.

The Porto Rico Lumber Co., of Moose Jaw, have got their new factory in running order. The building is fully equipped for manufacturing doors, sashes, windows, etc.

M. Beatty & Sons, Limited, of Welland, Ont., are building new shops with a capacity of over double their present plant. They will have the new plant in operation this fall.

I. Matheson & Co., Limited, New Glasgow, N.S., have issued an announcement of a new mine ventilating fan which they have arranged to manufacture. A fine cut of the fan is included.

The International Coal and Coke Co., of Coleman, B.C., have just closed a contract for ninety new ovens. When these are completed the company will have a total of 190 ovens in active operation.

A company is being formed in Stratford to build a large planing mill. A great deal of finished work is now brought into the city, and the intention is to handle all this in the new mill. The mill will cost about \$20,000.

The C.P.R. has added the "Monteagle" to its trans-Pacific fleet. Her first trip from Vancouver took place during June. The "Monteagle" is a first-class freighter, with accommodation for passengers.

The London council are considering a proposal from an outside capitalist for the manufacture of washing machines. The factory, if gone on with, will employ twenty or thirty hands to commence with.

The Ogilvie Flour Mills Company, Limited, have commenced work on the new elevator which is to replace the one which collapsed a month ago. The capacity of the new one will be from three-quarters to one million bushels.

The International Electric Co., with a capital of \$100,000 are seeking to make suitable arrangements with Chatham for the erection of a plant there. They ask a loan of \$20,000 at 3 per cent. interest, payable in fifteen annual instalments.

The Dominion Iron and Steel Company have had a new steamer, the "Tricolor," constructed for their service. The "Tricolor" is a large vessel, with a carrying capacity of about 7,000 tons of ore. She is 351 feet in length.

The Brantford Screw Company will erect an extensive new factory in that city. An option on a site in West Brantford has been secured, and buildings with a floor area of 30,000 square feet will be erected.

Plans are in preparation for a new factory for the Hamilton Sewer Pipe Company to replace the works recently destroyed by fire. The new plant will be larger than the old one.

The Backus-Brooks Company are erecting a large saw-mill at Burton's Point, near Keewatin, Ont. The main building will be 211 by 44 feet, with two wings of 70 by 27 feet each.

The Natal Manufacturers' Association, although organized only a few months ago, is making an energetic effort to strengthen the position of manufacturers in that colony. Mr. J. Reynolds-Tait of Durban is Secretary of the Association.

The Great Lakes Portland Cement Company will seek incorporation, with a capital of \$1,000,000, and headquarters at Port Colborne. The site of the factory will be about two miles out of the town. The company expect to turn out between 1,500 and 2,500 barrels of cement daily.

The Mooney Biscuit and Candy Company, Limited, of Stratford, have installed a complete line of private freight cars. This is the first company in Canada to own and operate such a system. The cars of standard size, weighing about 36,000 pounds and having a capacity of 60,000 pounds.

The Norton System of Telephones Co., Limited, have moved their head office from Halifax to Toronto. Their new offices and factory are at 64 York Street, Toronto. Their present quarters have been specially remodeled for them, and they have every facility now for carrying on their business.

The Crowe Iron Works, of Guelph, will erect new buildings this summer. The contractors have undertaken to have the buildings ready for occupancy by August 15th.

For the first time in the history of the Dominion Iron and Steel Company their four blast furnaces are now producing together.

T. Waterhouse & Co. will receive a loan of \$20,000 from the town of Ingersoll, to assist them in establishing a knitting mill in connection with their woolen mill.

The Dominion Iron and Steel Company have been awarded a contract for 50,000 tons of steel rails, for the Mackenzie and Mann system.

The Moose Jaw Machine Works, Limited, will erect a new factory building this summer. Plans have already been passed for it.

The Fletcher Manufacturing Co. have been voted financial aid by the ratepayers of Glencoe. The Company agrees to take over the plant of the Eldred Company and to enlarge it.

The German Card Board and Photo Mount Company will shortly commence operations in Peterborough. Machinery has been ordered and as soon as it arrives the factory will open.

The Gerhard Heintzman Company, Limited, have purchased an extensive site on Eastern Avenue. Their old premises have been becoming cramped and it was found necessary to increase the plant. A new building will be erected soon.

A deputation from Woodstock visited Detroit recently and got in touch with some manufacturers who were contemplating opening branches in Canada. An iron-working firm in particular is considering establishing a plant in Woodstock.

The Provincial Light, Heat and Power Company, of Montreal, have placed an order with the Canadian Westinghouse Company for the electrical equipment of their power house. The order calls for about 55,000 horse-power of various apparatus.

The Westminster Pipe Company will commence the erection of a mill in New Westminster for the manufacture of pipes within the next month. The company will also install an extensive water supply system through a number of British Columbia towns.

The township of Masson is to have a big boot and shoe factory. A Montreal firm is establishing there, and expects to employ 100 hands. The municipality is providing the building, which is to be 100 feet by 50, and is also giving an exemption from taxes for fifteen years.

It has been announced from Windsor that the United States Steel Corporation has actually bought land near Windsor for its contemplated plant. The location is in Sandwich West Township, on the river front, and is of easy access by the three railways operating in that district.

The Ross rifle factory, of Quebec, is having a new additional building erected in the rear of the present premises on the Cove Fields. The new building will be used as a storehouse, but owing to the blasting of the rock necessary for the foundation the structure will be a costly one.

The Cavendish Lumber Co. has been organized with a paid-up capital of \$200,000. The timber limits and saw-mills of the Dickson Company at Peterboro' and Lakefield, Ont., have been purchased. The new company will operate the mills to their full capacity and will cut 25,000,000 feet of lumber during the coming season.

A company has been formed in Winnipeg for the manufacture of office supplies. The business in this line has grown to large dimensions in the West latterly, and Western Systems will have a big field for its goods. It is understood that the Canadian Engraving and Publishing Co. will be absorbed by the new firm.

The largest planer made in Canada is being installed in the factory of A. Miles, Toronto. The machine weighs 24,000 pounds, and will dress 20,000 feet of lumber in ten hours, and will dress at one time the four sides of a stick of timber 16 by 30 inches.

The new plant of the Western Canada Flour Mills Co., Limited, is rapidly nearing completion. The initial capacity will be 4,000 barrels. The storage elevator, which is of cement tank construction, has a capacity of 500,000 bushels. Arrangements have been made for increasing the size of the mill as soon as business warrants it.

The Brandram-Henderson Co. will receive a bonus of \$10,000 a year for ten years from the Halifax city council, with tax exemption, cheap water and other privileges. In return the company will establish a lead corroding works, build a plant at a minimum cost of \$130,000, and employ seventy-five men, with an annual pay-roll of \$50,000.

The property owners of Cornwall have voted to bonus the Modern Bedstead Factory Company to the extent of \$20,000, with 10 years exemption from taxes. The Company have agreed to establish a large iron and brass bed factory, giving employment to not less than 100 hands after the first year.

The American Locomotive and Machine Company have plans completed for the outlay of \$1,000,000 on the Canadian plant at Longue Pointe, outside of Montreal. The proposed extensions include an addition to the bridge shops that will be enlarged so the weekly output will be increased from three to five locomotives, and new steam shovel and power houses will be erected.

The industrial activity of Galt continues undiminished. Large extensions are under way in the works of Sheldons, Limited, and MacGregor-Gourlay's. The new malleable iron works, the McVicker Gas Engine Works and the box factory provide marked increases in the manufacturing industries. A number of the smaller companies are also contemplating enlargements of their plants.

The Canadian Tin Plate & Steel Company, of Morrisburg, Ont., has its new plant near completion. The main building is 160x800 feet, of stone and structural steel construction. With equipment the mill represents an expenditure of about \$700,000. It will have a capacity of 30,000 tons a year, and the machinery will have additional capacity to carry an overload of one-third, should trade requirements be sufficiently heavy. The plant will be operated by electricity, the town of Morrisburg, providing free power for twenty years.

An action was instituted during the month against the Ontario Silver Company, of Niagara Falls, Ont., for defrauding the public by making false descriptions of goods manufactured by them. The specific complaint was that goods manufactured by the Ontario Silver Company were labeled as products of Sheffield, Eng., manufacturing houses. The Cutlers' Company, of Sheffield, entered a complaint to the Dominion Government and Crown proceedings were the result. It was shown that 244 boxes were found on the premises, labeled as follows: "Sheffield Cutlery Co., warranted best silver knives, plated with pure silver, Sheffield, England." The company was fined \$150 on each of four counts.

AN ENGLISH OPINION.

SEEING the growth of Canada day by day and year by year, we sometimes fail to grasp the greatness of the advance which has taken place in a few years. An outside view helps us to appreciate our own greatness. It was not many years ago that the colony in the north of North America was looked upon with little hope in England. A few decades back British statesmen did not hesitate to express their opinion that a friendly severance of the ties would relieve England of an unpromising burden. The frozen north gave little promise of the mineral wealth and richness of soil which are now revealed.

Canada is at last coming to her own. The feeling in England is expressed in a striking manner in an article in a recent issue of the London "Telegraph." The change in sentiment is most gratifying to Canadians. It was no easy task that faced the pioneers of this country. Borne up by far-sighted enterprise and confidence in the future they wrested success from defeat till now they have forced their own confidence on all the world.

The discussion in the "Telegraph" is on Empire developments. "The fact remains," it says, "that Canada in a more extraordinary sense even than the United States is the land of unlimited possibilities. The resources of the Republic are vast, but they are already measurable; those of the Canadian Dominion are only now beginning to be estimated, and every competent authority upon both sides of the border-line now realizes that increasing knowledge has not yet suggested where bounds are likely to be reached in the development of British America. In area it is equal to its neighbor. In population it will not in the long run be inferior. The greatest of the colonies will probably excel the Mother Country in the number of its inhabitants before many decades have elapsed; before the present century is out it will hardly contain less than a hundred millions of inhabitants; and it has no negro question. With two fronts on the two main oceans, with its lines of traffic by land and water running east and west rather than north and south, Canada, offering the shortest route to Japan, and mediating between the centres of population and production in Europe upon the nearer and in Asia upon the further hand, will ultimately command the greatest through routes of the globe. Upon the Pacific and the Atlantic alike the coal that will bunker its shipping is mined under its harbors. It must become the chief granary from which all the dense industrial nations of the future will draw the larger part of their food supplies. Its virgin soil is already attracting over the border some of the best elements in the farming population of the older Republic. The agricultural wealth of Canada must ultimately exceed that of the United States, and the Dominion will develop manufacturing power in proportion. New trans-continental railways are seaming its territories from sea to sea, and its progress goes forward by leaps and bounds in a ratio never surpassed in the most triumphant phases of expansion in American history. This is Canada—an Empire in itself, which may well aspire to become upon its own basis in some distant generation the predominant economic power of the world, and the massive keystone, as it were, surmounting and holding together not only the arch of Anglo-Saxon unity, but the fabric of the whole world's peace."

Mr. W. A. Preston is reported to be about to build a pulp mill at Fort Frances, Ont. Mr. Preston has large timber interests and owns a mill stream from which he could develop power.

THE WESTERN EXCURSION.

An advance notice has been issued by the Canadian Manufacturers' Association, giving the itinerary and arrangements for the Western excursion. The list of places at which the members of the party will stop, includes all the towns and cities of importance in the West. The excursion will leave Toronto and Montreal on September 14th, and will arrive in Winnipeg on the 16th. On the three following days the convention of the Association will be held. Following this the members who are not taking the coast trip will return, reaching Toronto or Montreal on Saturday, the 22nd. This will allow those who just wish to attend the convention to do so in ten days.

The trip from Winnipeg to Victoria will be a most enjoyable one. Leaving by C.P.R., the course will be through Regina, Moose Jaw, Calgary, Banff, to Vancouver and Victoria. Besides the interest which attaches to the great wheat fields of the West, and to the towns whose location and natural advantages are fast making them centres of industrial life, the excursionists will have the advantage of a day and a half in Canada's national park at Banff. Of all the scenery to which this continent can lay claim, there is nothing to excel in grandeur the wonderful lakes, forests, and snow-capped mountains of this district. From Banff the party will proceed through the mountains and across British Columbia to Vancouver, and thence across the channel to Victoria.

Returning, the route lies through Glacier, a mountain town, and north to Edmonton, where a stop will be made. From Edmonton to Winnipeg the trip will be by the C.N.R. A number of prominent towns will be visited during the journey. From Winnipeg, the C.P.R. will carry the party back to Montreal and Toronto. The time taken for the excursion, including attendance at the convention, will be twenty-one days.

The excursion will take place only on condition that a sufficient number of reservations have been made in advance. Final decision will be taken on July 25th, by which time it is expected that those who intend to go will have communicated with the Secretary. Reservations in sleeping cars will be made in the order in which applications are made.

The excursion is a notable one in Canadian life. Few countries are situated as Canada, with its manufacturing interests centred in one part and its great agricultural wealth in another. The present prosperity and development of this country are the result of the co-operation of these elements. Whatever will tend to bring these two interests together will make for the general welfare of Canada.

The visit to the West of a large number of representative manufacturers will do much to make both parts of the country better acquainted. The manufacturers will have an opportunity of seeing the vastness of the territory and the possibilities in the way of a producing and consuming population in those fertile fields. The men of the West will get into contact with their Eastern fellow-citizens and better market facilities and better understanding of the wants of the other will follow.

We are not going too far in holding that the convention in Winnipeg and excursion to the coast will be of great material benefit to both East and West. Its success will largely depend upon the number of those who avail themselves of the opportunity to attend, but enough are assured to make it certain that every big industry will be represented. We trust that a record crop will greet a record convention.

Mutual Fire Insurance.

From returns received in the few days that have elapsed between the issue of the letter and pamphlet by the Insurance Department of the Canadian Manufacturers' Association on the subject of Mutual Fire Insurance, and the time of going to press, the response received from the members is not only encouraging but far exceeds the most sanguine expectations.

In the form of agreement accompanying the letter, provision was made that no subscription should be binding until a minimum total insurance of \$500,000 had been definitely promised, this sum formed the basis upon which it was considered the proposed organizations might reasonably begin operations. At the time of writing agreement forms have been returned promising support in each of the two proposed companies of a total insurance of over one million one hundred thousand dollars, and every mail adds to the list.

Quite a number of members have written in terms of general approval of the proposed companies, and promise full support when the plans are formulated and they are properly organized; these have not, of course, been reckoned amongst the definitely signed agreements, but none the less they may be counted on as adding to the strength and success of the enterprises.

It is quite evident the suggestion to form mutual fire insurance companies, *for manufacturers' risks only*, is being received with general favor, and some definite progress may, therefore, be looked for at an early date.

Supply Catalogues.

To increase our export trade with the world, the Canadian Manufacturers' Association is co-operating with the Department of Trade and Commerce, Ottawa, in sending catalogues of goods manufactured in this country to our commercial agents abroad. Canada has twelve commercial agents. Each of these should have a complete set of catalogues, with price lists and other information affecting the sale. This is the only way in which a representative can keep in touch with the manufacturers of his country. In the more distant countries, particularly, it is impossible to come home frequently. Yet complete familiarity with Canadian products and manufactures is essential.

Manufacturers who have not already complied with the request of the Association to forward catalogues should do so at once. It is a cheap and effective means of developing new business. In this way the lines of goods which can be manufactured in this country will become known to foreign buyers. The Secretary of the Association will gladly forward any more sets of catalogues which may be sent in.

TRADE ENQUIRIES.

NOTE.—For further information regarding any enquiry mentioned under this heading or the names of enquirers, apply by number to the Secretary, at Toronto.

409 **Agencies.**—A general produce and commission merchant in **Antwerp, Belgium**, wishes to represent a first-class Canadian export house. He has good connections and sends as reference a local bank.

410 A wholesale grocer in **Glasgow, Scotland**, is prepared to take the exclusive agency in that territory for any good saleable article belonging to the grocery trade. Bank references are furnished.

411 A firm doing a large indent business in **New Zealand**, having warehouses both in **Dunedin** and **Wellington**, and able to give satisfactory references, is prepared to take up agencies for machine tools or any hardware lines. Every town throughout the country is canvassed every six weeks to two months.

412 Several correspondents in **New Zealand** are ready to represent prospective exhibitors at the International Exhibition at **Christchurch**, and to push the sale of their goods afterwards.

413 A firm in **London, England**, with branches in **Port Elizabeth**, **Cape Town** and **Durban, South Africa**, would be pleased to act as agents for any Canadian manufacturer seeking representation in that country. **London** references furnished.

414 **Bags (Paper and Pulp).**—Enquiry is made by a firm in **Anwerp, Belgium**, for the names of Canadian houses able to supply a bag made from heavy paper or pulp and capable of holding 200 pounds flour. If a satisfactory article is furnished order for several thousand per month would follow.

415 **Building Material.**—Companies have been formed in **Bermuda** for the purpose of erecting two hotels, to cost \$385,000, and invite correspondence from Canadian firms able to supply them with interior wood work, plumbing fixtures, electric light appliances and furniture.

416 **Canned Goods.**—A **Yorkshire, England**, firm with many branches in the **West Riding** desires to get in touch with Canadian exporters of canned goods, hog products, butter, cheese and eggs.

417 **Canned Meats and Fruits.**—An **East Coast of England** firm desires to get in touch with exporters of canned meats, canned fruits and breakfast foods.

418 **Chair Legs.**—A furniture manufacturer near **Liverpool, England**, is prepared to buy the above in walnut and oak, and invites correspondence from interested shippers.

419 **Cloth Boards.**—A firm of woollen importers in **Toronto**, are prepared to buy unlimited quantities of cloth boards, to be delivered in carload lots.

420 **Doors, Windows, etc.**—A **Yorkshire, England**, firm of timber merchants desire to hear, with quotations, from Canadian exporters of pine, spruce, and all kinds of turned and fancy woodwork, doors, windows, balustrades, etc.

421 **Furniture.**—A responsible party with bank references has recently established a furniture business in **Hull, Quebec**, and would be glad to get into communication with firms wishing to do business in that quarter.

422 **Gas Engines, Suction Gas Producers.**—A pork packer in **Ontario**, well-known to the Association, is open to purchase the above and asks to be supplied with catalogues and prices.

423 **Grain, Bran, Flour.**—A firm in **Bristol, England**, is open to take up an agency for the sale of grain, bran, flour or any kind of produce.

424 **Hog Products and Canned Goods.**—An energetic commission agent in **London, England**, asks the privilege of representing Canadian firms in that market. He writes as follows:—"The startling disclosures from **Chicago**, made public the past few days, should be taken advantage of by Canadian packers, by asserting the purity of their goods, supported, if possible, by photographs of

the interior of their factories with a government official certificate. Just now, when the British public are horrified with anything tinned, the bold and persistent pushing of Canadian meats, etc., with a little judicious advertising should bring them the bulk of the trade with the returning confidence, which is sure to come."

- 425 **Hog Products.**—A Yorkshire, England, firm of produce merchants desire to get into direct communication with Canadian exporters of hog products, cheese, butter and canned goods.
- 426 **Household and Office Furniture.**—A London, England, firm wishes to hear from Canadian manufacturers of household and office furniture wishing to do business in South Africa.
- 427 **Lumber, Soft and Hardwood Logs.**—A correspondent in Orsonnens, Switzerland, is prepared to buy soft and hardwood logs, unbarked, also building lumber of all kinds, and asks for quotations by the schooner load delivered at some European port.
- 428 **Lumber.**—An extensive importer in Belize, British Honduras, invites correspondence with samples of wood and prices per schooner load, from Canadian manufacturers of lumber.
- 429 **Maple Blocks.**—A manufacturer of lasts and boot trees in London, England, asks for quotations on kiln dried maple blocks of the following dimensions: 40 x 11 x 4½; 40 x 10 x 4; 33 x 8½ x 3¾; 19 x 7½ x 4; 22 x 11 x 3¾. Equal quantities of each and enough for a carload in each delivery. Continuous orders if satisfaction is given.
- 430 **Paris Green.**—A small but thoroughly reliable firm in the British West Indies are open to purchase Paris green, and ask for samples and analyses, with prices for not less than half a ton at a time, put up in 14, 28 and 100 pound packages. If cotton cultivation proves successful an extensive market will develop.
- 431 **Pulp Board.**—A manufacturer of paper boxes and similar goods in London, England, asks to be placed in touch with Canadian shippers of the above.
- 432 **Spokes, Bent Motor Car Seats.**—Urgent enquiry is made for the names of Canadian shippers of artillery or motor car spokes, 1½ to 3 inches thick; also bent motor car seats, by a house in Altona, Germany. Illustrations furnished on request.
- 433 **Tin Bottle Caps.**—A well-known export house in New York invites correspondence from Canadian manufacturers of the above, with a view to placing an order for 20,000 gross. Quotations f.o.b. New York.
- 434 **Tinned Meats.**—A Bristol, England, firm wants agencies for Canadian manufacturers of tinned meats, cured meats, bacon, etc.
- 435 **Wire Nails.**—Quotations are asked f.o.b. New York, by a firm in London, England, exporting to New Zealand, on rose head wire nails, and flat countersunk head wire nails, in kegs of 112 pounds net. Providing prices are right they state that a large business will probably result. Detailed specifications will be furnished on application.
- 436 **Wood (Birch).**—A Bristol, England, man would represent Canadian firms selling wood (chiefly birch) cut to size for the furniture trade.

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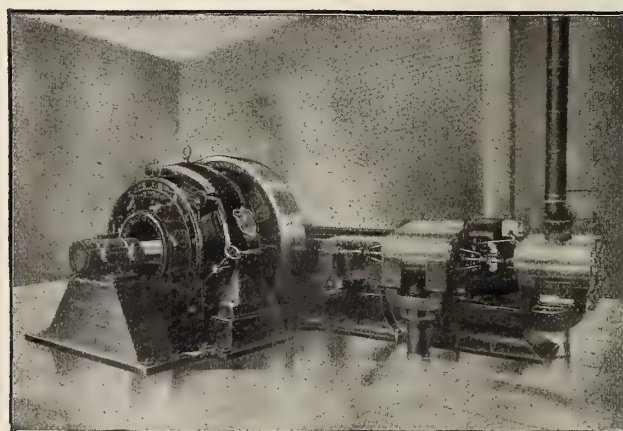
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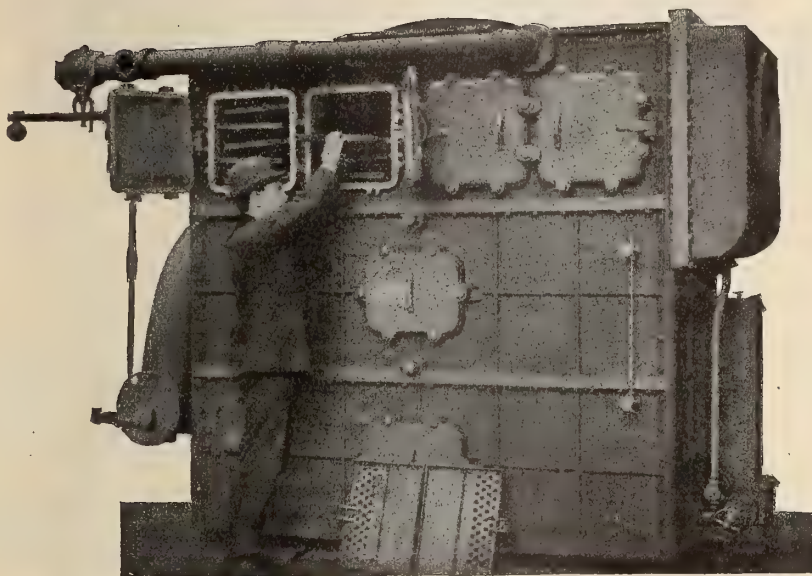
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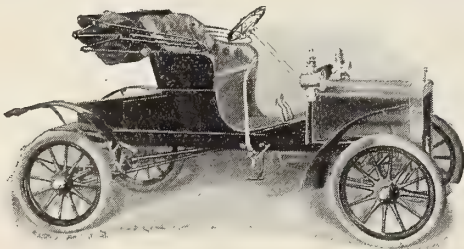
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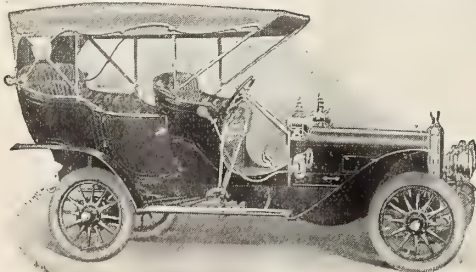
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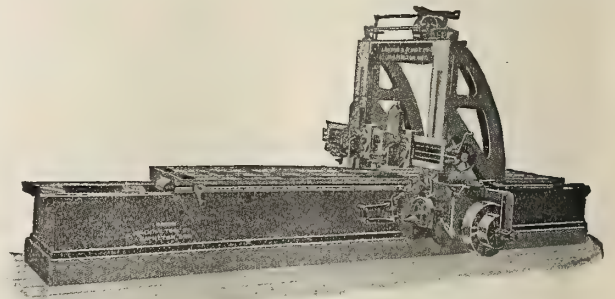


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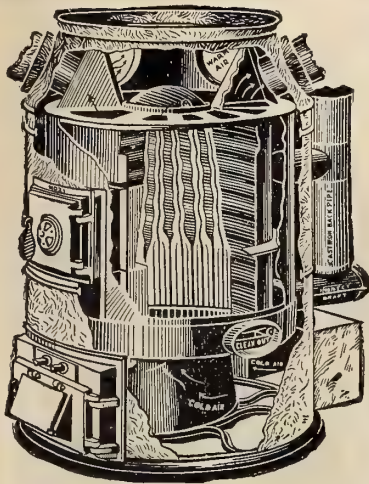


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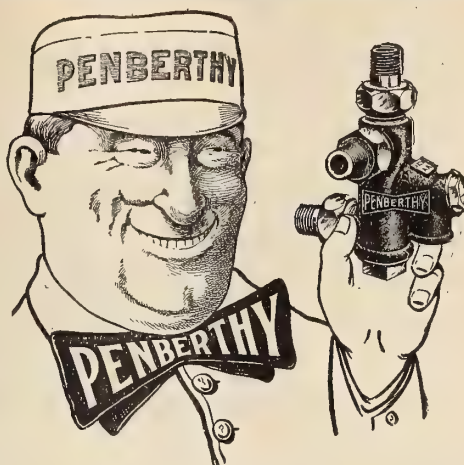
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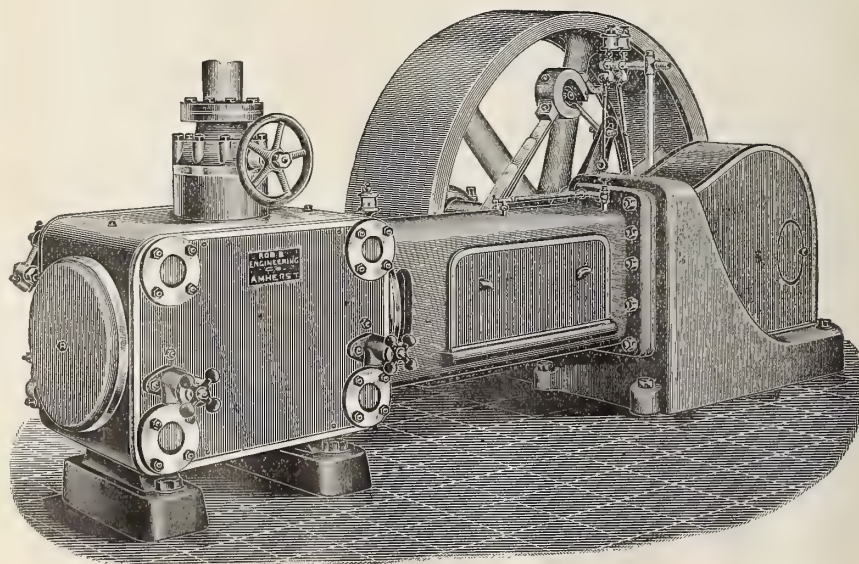
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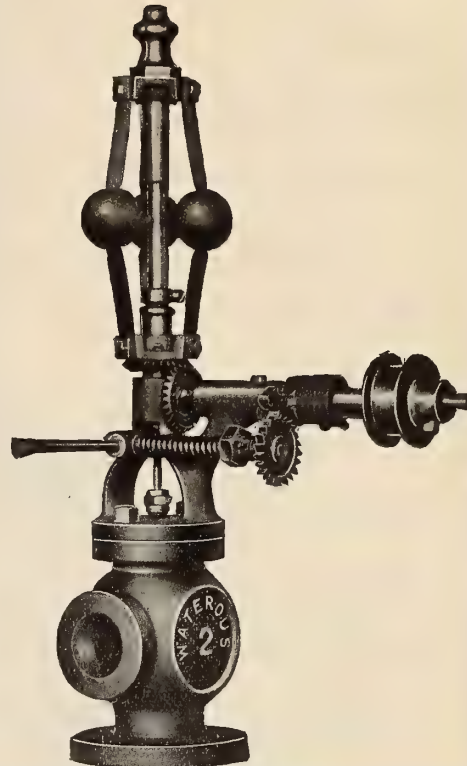
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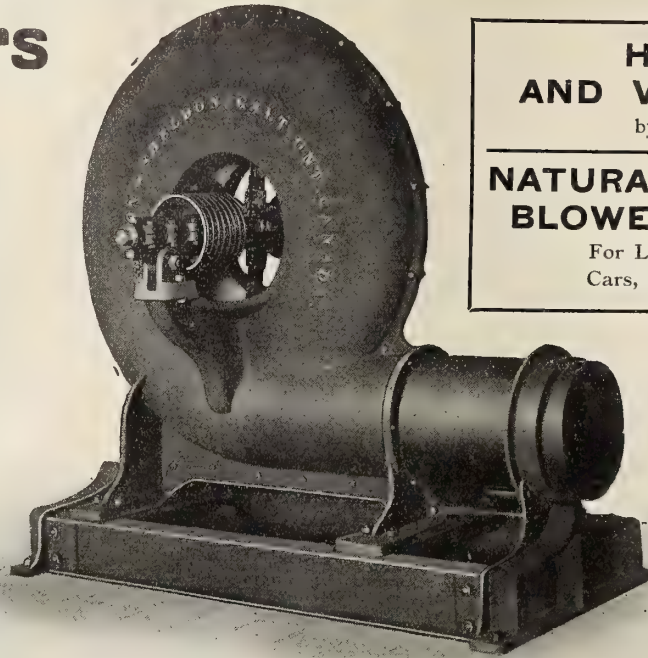
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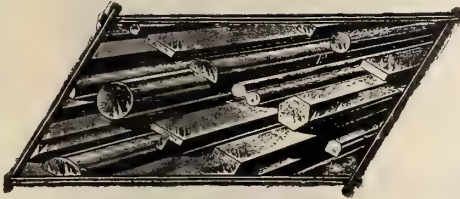
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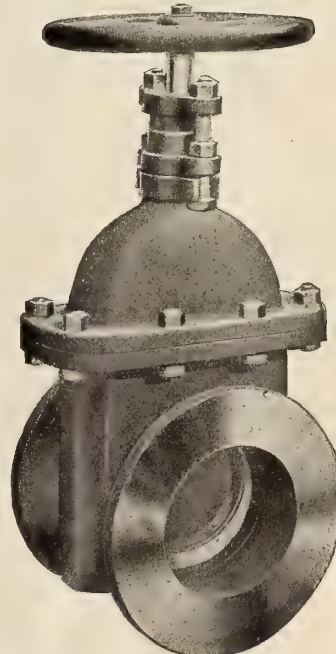
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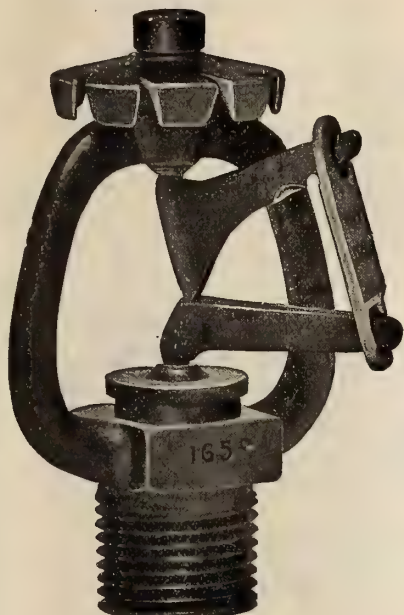
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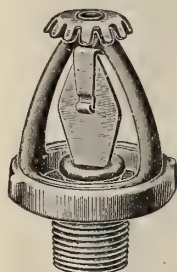
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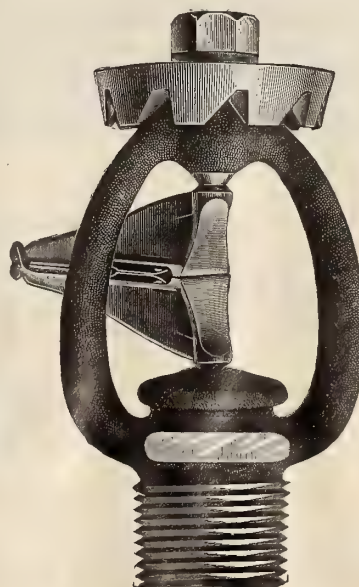
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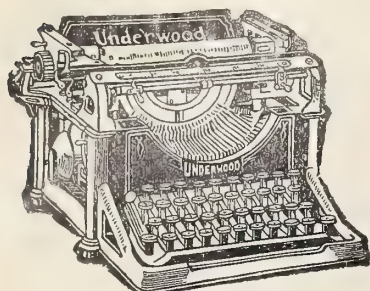
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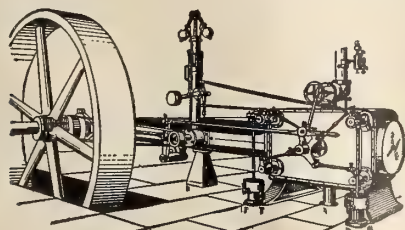
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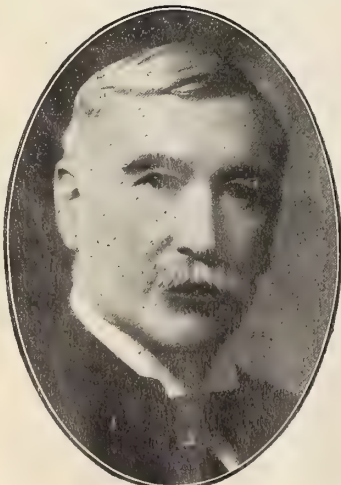


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EXECUTIVE COUNCIL

THE JUNE MEETING.

THE regular monthly meeting of the Executive Council of the Canadian Manufacturers' Association was held in the Council Chamber, Board of Trade Building, on June 21st, 1906, at 2 p. m. The President, Mr. C. C. Ballantyne, Montreal, was in the chair. Other members present were:—Messrs. George Anderson, Toronto; C. Bermingham, Kingston; Henry Bertram, Dundas; F. Birks, Montreal; Geo. Booth, Toronto; H. Cockshutt, Brantford; John W. Cowan, Toronto; John Dick, Toronto; J. S. N. Dougall, Montreal; L. V. Dusseau, Toronto; Thos. Findley, Toronto; H. W. Fleury, Aurora; Geo. D. Forbes, Hespeler; W. K. George, Toronto; W. P. Gundy, Toronto; J. Hewton, Kingston; Jos. Horsfall, Montreal; J. B. MacLean, Toronto; W. K. McNaught, Toronto; R. McLaughlin, Oshawa; J. P. Murray, Toronto; J. A. Publow, Hamilton; H. Stroud, Paris; A. S. Rogers, Toronto; Hon. J. D. Rolland, Montreal; W. B. Tindall, Toronto; J. M. Sinclair, Toronto; Geo. W. Watts, Toronto.

The minutes of the May meeting were on motion taken as read.

Communications were received as follows:—

(1) From members unable to be present,—Messrs. Geo. E. Amyot, Quebec; F. J. Smale, Toronto; C. A. Birge, Hamilton; J. F. Ellis, Toronto; R. A. Donald, Toronto; E. G. Henderson, Windsor; S. R. Hart, Toronto; John Turnbull, Toronto.

(2) From the Montreal Branch recommending action on a resolution passed by the Montreal Gold and Silver-smiths' Section, urging that steps be taken to provide help for the members of the Association. Referred to the Parliamentary Committee.

(3) From the Furniture Manufacturers' Section of the Canadian Manufacturers' Association to the same effect. This was dealt with similarly.

(4) From the Canada Horse Nail Company, Montreal, suggesting that the Association endeavor to have continued an arrangement between the Government and the Canadian Bankers' Association for the exportation of foreign coinage. This was referred to the Parliamentary Committee.

(5) From Mr. R. H. Campbell, Secretary of the Canadian Forestry Association intimating that arrangements were being made for a meeting of the Forestry Association in Vancouver on September 25th and 26th, and suggesting that arrangements might be made whereby the members of the Forestry Association might accompany the members of the Canadian Manufacturers Association on their Western trip. This was referred to the Reception and Membership Committee with power to act.

Reports of Officers and Committees.

The President, Mr. Ballantyne, referred briefly to the work before the meeting and made reference to the assistance which had been given by the late Secretary, Mr. R. J. Younge, in creating an interest in Western Canada in connection with the proposed excursion.

The Secretary reported on the work of the office for the past month. He referred to meetings of Quebec and Winnipeg Branches of the Association, and to meetings of the Cloak, Furniture, and Gold and Silversmiths Sections.

He also reported that the Manitoba Branch were making special efforts to arrange a reception and entertainment for the convention and were looking forward to receiving a very large number of representatives from Eastern Canada at the convention.

Mr. Booth, the Treasurer, presented his report, which outlined the position of the finances of the Association for the past ten months ending May 31st, 1906. The report was received with satisfaction.

Finance Committee.

In the absence of the Chairman of the Finance Committee, the report was presented by the Treasurer. It dealt with certain changes which had been made in the personnel and wages of the office staff and the action of the Committee in placing several Association accounts in the hands of the Association's solicitors for collection.

It recommended that the monthly accounts of the Association, regarding which detailed information was given, should be paid. The report was adopted.

Parliamentary Committee.

The report of the Parliamentary Committee was presented by the Chairman, Mr. Geo. W. Watts. The report was as follows:—

The Committee held three meetings during the month.

Two of the meetings were entirely taken up with the consideration of the Prison Labor Contract entered into between the Ontario Government and Messrs. Taylor, Scott & Company, and which was brought before the Executive Council at its last meeting by a communication from the United Factories, Limited, and referred to the Parliamentary Committee for consideration.

The Committee considered the contract very carefully. It was entered into on April 18th and is to be in force from September 1st, 1905, to September 1st, 1910. It has been ratified by the Provincial Government. There is no doubt in the minds of the Committee but what the agreement is a very favorable one so far as the Taylor Scott Company are concerned, and it places the Taylor, Scott Company in a position to interfere seriously with the business of other manufacturers.

Representatives from both companies appeared before the Committee, and the point of issue between them appeared to the Committee to be that the competitors of the Taylor, Scott Company were afraid that the Taylor, Scott Company would take advantage of the favorable contract they had received from the Government, and put goods on the market at prices that would be ruinous to the other factories. In the opinion of the Committee, however, no evidence was shown to the effect that the Taylor, Scott Company were doing this, and the company denied that they were selling at less than other companies or that they were likely to.

The Committee respectfully forwarded its opinion to the Council with the recommendation that the Council take action as it saw fit.

This part of the report was referred back to the Parliamentary Committee with the understanding that no action should be taken regarding the contract in question, but that the Committee should draft a resolution outlining the

attitude of the Association regarding the whole question of prison labor and report at the next meeting of the Council.

Other matters dealt with were:—

Organization of a Labor Department.

A communication forwarded to the Committee by the Executive Council and resolutions passed by the Montreal Gold and Silversmiths' Section and the Furniture Section, all having reference to the organization of a Labor Bureau within the Association were carefully considered.

The Committee decided to send a circular letter to the members of the Association to ascertain the existing conditions respecting the supply of labor, and at the same time to request an expression of opinion regarding the advisability of organizing an employment department. Further action was postponed pending the replies to this circular.

Alberta Law Respecting Engineers.

Copy of a new law of the Province of Alberta was submitted to the meeting. This law incorporated several suggestions that had been made by the Association. These amendments referred to new or newly repaired boilers and to workmen from manufacturing establishments engaged in setting up or installing plant.

With the change as indicated the report was approved of.

The Government Immigration Policy.

Mr. Bermingham brought to the attention of the Council the present immigration policy of the Dominion Government, which was designed to discourage the bringing of trained help to Canada. A number of members expressed opinions, and all were unanimous to the effect that the Government should not discriminate against the class of workmen that should be brought to Canada, particularly as those requiring skilled help were in as great need of assistance as the other classes of the community.

After discussion a resolution was carried to the effect that the Executive Council re-affirm the resolution passed by the Annual Meeting of the Canadian Manufacturers' Association, held in Montreal in October, 1904, having reference to the immigration policy of the Dominion Government, and that a copy of this resolution should be forwarded to the Government and to all the members of the House of Commons. The resolution referred to is as follows:—

"That provision should be made for the lawful importation of skilled mechanics from any other country, provided that the help required cannot be obtained in the Dominion;

"That the Immigration Department of the Dominion Government should encourage and not discourage the emigration to Canada of the best classes of skilled workmen from other countries, provided that these workmen are required in Canadian industries and cannot be secured in Canada."

Industrial Canada Committee.

In the absence of the Chairman of the Committee this report was presented by the Secretary.

It outlined the efforts that had been made by the Committee to increase the circulation of INDUSTRIAL CANADA which had met with success. It reported that in coming issues of the paper articles would be published summing up the advantages and disadvantages of the Decimal and Duo-Decimal systems.

In view of the fact that certain parties were contemplating publishing a paper in Western Canada, to be called

INDUSTRIAL CANADA, the Committee have had the words INDUSTRIAL CANADA registered as a specific trade mark. The report presented figures showing that the financial position of the paper was satisfactory.

Railway and Transportation Committee.

The report of the Railway and Transportation Committee, which is published in full in another column, was presented by the manager of the department, and was adopted.

After reading the report the manager of the department read press clippings showing that the Government were taking steps to have the Railway Act amended so as to bring the question of tolls for express companies under the Railway Act. This announcement was received with extreme satisfaction.

Technical Education Committee.

The report of the Technical Education Committee was presented by Mr. Thos. Findley. It outlined the efforts that had been made to have the Dominion Government appoint a Dominion Commission on Technical Education and concluded with the following resolution:—

"The Technical Education Committee has now been working as a special committee for the past two years and the present indications point to the necessity for the continuance of such work.

"The Committee, therefore, beg to recommend to the Convention Arrangements Committee of the Association that a recommendation be forwarded to the annual meeting to have the By-laws of the Association amended so as to put the Technical Education Committee on the same footing as the other standing committees." The report was adopted.

Commercial Intelligence Committee.

Mr. W. K. George presented the report of the Commercial Intelligence Committee, and on motion the same was adopted.

The report was as follows:—

Communications were received from

(1) The Secretary of the Decimal Association, London, England, urging the Association to request the Premier to support at the Conference of Colonial representatives the adoption of the Metric System of Weights and Measures throughout the British Empire. The Committee decided to take action on this letter by forwarding a copy of the resolution passed by this Association both to the Decimal Association and to the Premier.

(2) Mr. Geo. A. Slater, Montreal, bringing to the attention of the Committee the desirability of having the regulations governing the use of stamped envelopes amended so that their use might be encouraged. The Committee are investigating conditions as they exist both in Canada and the United States, and hope to make a recommendation to the next meeting of the Council.

(3) The British Consulate, Chicago, to the effect that an effort was being made to gather information from Canadian towns and cities for the use of United States manufacturers contemplating locating in Canada, and also outlining a proposal that had been made for the establishment of an Exhibition for British and Colonial goods in Chicago.

The points raised in this letter were of such importance that the Committee decided to offer the assistance of the Association for the purpose of providing information.

(4) Mr. Issa Tanimura, Tokio, Japan, the correspondent of the Association for Japan, asking to be authorized to describe his position as the "sole representative of the Canadian Manufacturers' Association." The Committee decided adversely to this request.

New Zealand Exhibition.

The Exhibition Branch, Department of Agriculture, have been working with your Committee to arrange a creditable exhibition of Canadian manufactured goods.

Up to the present time forty-seven manufacturers have definitely decided to exhibit in the Canadian court. In addition to these there will be other firms represented whose goods will be exhibited there through local agents.

The Committee approved of the request made by the Exhibition Branch that they should be supplied with "Made in Canada" signs issued by the Association, the Exhibition Branch to pay the cost of the same.

Canadian Catalogues.

In reply to the circular letter sent out by the Committee asking for catalogues to send to the Canadian Commercial Agents over one hundred and fifty complete sets have been received, and they will be at once forwarded to the different Commercial Agents.

Congress of Chambers of Commerce.

The Committee decided in order to facilitate action on the part of the delegates from this Association to the Congress that a chairman should be appointed. Mr. Geo. E. Drummond was selected, and has accepted the position.

The Committee have arranged for a meeting of the delegates from Vancouver, Toronto, Winnipeg, and Montreal Boards of Trade, La Chambre de Commerce du District de Montreal, and this Association on the day before the opening of the Congress meetings, for the purpose of considering the different resolutions bearing on the trade of the Empire, which have been forwarded for the consideration of the Congress.

Insurance Committee.

The report of the Insurance Committee was presented by the Vice-Chairman, Mr. W. B. Tindall, and was adopted as given below:—

"We attach* hereto copy of circular letter and pamphlet sent on the 16th inst. to all members except those insured in the New England mutual companies, defining the position of the Association in respect to Mutual Fire Insurance.

It is yet too early to form any complete idea of the reception this subject has met with, but returns from Ontario and Quebec members indicate that the endorsement of the Association to the formation of two manufacturers' mutual companies is being received with favor. In the three days in which replies have been possible we have received 77 signed agreements, promising \$526,000 insurance to each of the two proposed companies, of which, however, only \$346,000 would at the outset be available. In addition a number of letters from leading manufacturers have been received heartily approving the proposal and offering on organization to contribute to their successful operation.

As a result of conference and correspondence with the New England mutual companies, the proposal to organize a Canadian company to work in co-operation and affiliation with them has met with their unanimous approval, and a

*The letter and pamphlet are not published herewith for the reason that they have already been sent to each member of the Association.

circular letter on this branch of the subject will be issued within a day or two to all the members of the Association now insured with the New England offices.

The Committee has had under consideration the letter of the Northern Mills Company, Limited, referred to us by the Executive Council, suggesting the desirability of organizing a mutual company for employers liability insurance on the lines of the American Mutual Liability Insurance Company. We have looked into the plans and resources of this company, and, whilst it is evident that they are in excellent financial condition, and in the sphere of employers liability are doing equally good work to that performed by the New England mutuals in respect to fire insurance, we are of the opinion that the time is not opportune to take any step in the direction of a Canadian organization on these lines.

The Committee is now engaged in preparing amendments to the Insurance Act in anticipation of the revision which it is expected will take place at the next session of the Dominion Legislature, and will report thereon in due course.

Reception and Membership Committee.

The report of the Reception and Membership Committee was presented by the Chairman, Mr. L. V. Dusseau, and was adopted.

The report recommended the acceptance of nineteen applications for membership. The names of these new members are published in another column.

The Committee recommended the adoption of a design for an Association crest, which had been prepared by Messrs. Henry Birks & Sons, and the Council approved of the adoption of the same.

Other subjects were dealt with as follows:—

The Committee approved of the suggestion made by the Montreal Branch to the effect that it should extend its boundaries so as to include manufacturers situated near Montreal. The Montreal Branch has since taken action.

The question as to whether or not certain companies closely allied to manufacturers were eligible for membership in the Association is respectfully referred to the Executive Council for consideration with the recommendation that light, power, and gas companies be declared eligible for membership.

Winnipeg Convention and Western Excursion.

Announcements have been issued giving information regarding railway rates to the Winnipeg Convention, and giving an itinerary which includes a trip to the Pacific Coast, together with railway rates and charges for accommodation. The Committee is pleased to report that this announcement has already resulted in a number of members of the Association making reservations.

The Manitoba Branch of the Association has taken steps to look after Convention arrangements in Winnipeg, and have appointed a special committee for the purpose.

The Convention badge has been approved of by the Committee, and an order for the same has been given to Messrs. Henry Birks & Sons, Montreal.

The Committee authorized the Secretary to go to Winnipeg to confer with the Manitoba Executive regarding Convention arrangements, and to give the local Committee what assistance he could.

Since the last meeting invitations have been received from a number of Western towns, including Saskatoon, Moose Jaw, Port Arthur, Fort William and Victoria, asking

the excursion party to arrange their itinerary so as to visit these different places. Where possible the Committee has accepted the different invitations.

The report of the Montreal Branch was presented by Mr. J. S. N. Dougall, and the report of the Toronto Branch by Mr. W. B. Tindall. Both reports were duly received and are published in another column.

The meeting adjourned at 3.30.

RAILWAY AND TRANSPORTATION DEPARTMENT.

The report of the Railway and Transportation Department to the Executive Council was as follows:—

The past month has been a very active one in the Department, almost two weeks having been taken up by hearings of the Board of Railway Commissioners at which complaints of discrimination in railway rates have been dealt with.

The complaint with regard to difference in east and west-bound rates was heard at Toronto sittings commencing May 30th. The Department complained on behalf of Stauntons Limited, of the higher rate east-bound than west-bound, and the whole situation was dealt with by the railways in reply. The higher basis of rates between the east and west was claimed to result from greater activity in water competition on the west-bound traffic, and the excessive movement of empty cars west-bound as compared with east-bound. The matter was very fully discussed, and is now with the Railway Commission for decision.

The hearing of complaints of discrimination against Western Ontario in freight rates to points in Eastern Canada brought about by the system of lower rates from United States points than from intermediate Canadian points to the same destinations was resumed at Ottawa on the 6th inst. The railways claimed that their present rates were justified by the difference in population of Canada as compared with the central and eastern States, such as Michigan, Ohio, Indiana and Pennsylvania, difference in climatic conditions, alleged increased expense of operation in Canada, difference in volume of traffic available in the United States as against Canada, and difference in gross freight earnings per mile of line in Michigan and other States as compared with the gross freight earnings on Canadian Railways. These arguments were criticized from the Association's view point, and our position carefully stated to the Board. Our complaints dealt with specific cases of discrimination on valves, hydrants, paints, varnish and vehicles, but throughout the hearing the railways made it clear that the principle involved was one underlying the arrangement of all rates at the Detroit, Niagara, and other frontiers, and intimated that complete readjustment of these rates would be necessary in the event of the Railway Commission deciding against them.

The railways took the position that owing to the wide differences in the Canadian and United States classifications it would be hopeless to attempt to reconcile the rate system of the two countries, and that they were unable to arrange for advances in the rates from United States points, while on the other hand to adopt the United States basis for their Canadian traffic would so reduce freight revenues as to cripple the roads. The question was very fully and elaborately discussed. The excessive differences against Canadian shippers in favor of those across the border were clearly shown, and the Board was asked to say whether or not the long and short haul clause of the Railways Act was to be effective

in Canada, and whether the railways were to be permitted to carry into Canada over the same lines to the same destinations, in the same cars for United States shippers at better rates than they will give to the intermediate Canadian shippers. For the Association it was claimed that the customs tariff in a large measure explained the present situation as were it not for the duties the railway companies' position would be untenable. The whole matter was left with the Board and their decision will be awaited with interest.

Honoring Railway Tickets Both Ways.

At the suggestion of Vice-President, Mr. Cockshutt, correspondence was opened with the railways respecting the honoring of single trip tickets in both directions. Replies from the passenger traffic managers of the Grand Trunk and Canadian Pacific Railway Systems state that the question will be discussed at the next meeting of the Eastern Canadian Passenger Association, and the result communicated later on.

Shed Storage Tariff.

The shed storage tariffs in use on Canadian railways, recently re-issued, contain conditions by which it is intended to limit the responsibility of the railways as insurers of property while in their possession. The railways seek to limit their liability to a period of twenty-four hours after the freight has been received at shipping point or unloaded at destination, whether the consignee is advised or not. A communication has been sent to the Secretary of the Railway Commission calling attention to these objectionable conditions and asking if the Board will take any action with respect to the same.

Throughout the month the Department has been called upon to answer numerous inquiries with regard to railway and transportation questions.

MONTREAL BRANCH.

The regularly monthly meeting of the Montreal Executive Committee was held on June 14th, with the Chairman, Col. Jeffrey H. Burland, presiding. There were also present:—Messrs. C. C. Ballantyne, D. Lorne McGibbon, Geo. Esplin, W. T. Whitehead, Robt. Gardner, S. W. Ewing, J. H. Birks, J. R. Kinghorn, and J. H. Sherrard.

As the Reception and Membership Committee had authorized the extension of the Montreal Branch within the limits defined, as the commutation area of the railroads running out of Montreal, it was decided to affiliate ten members in the immediate vicinity of Montreal.

A complaint from one of the members that the C. P. R. steamship rates from Europe to Montreal discriminated in favor of the Continental manufacturer as against the British manufacturer, was referred to the Railway & Transportation Department.

The Committee expressed its approval of the suggestion of Mr. Geo. A. Slater that the Government should be requested to issue stamped envelopes of different sizes at a reasonable rate, with proper arrangements for redeeming same.

A complaint from Davies, Limited, that the Quebec Government was charging a \$50 tax on each of their six retail stores in Montreal, was referred to the Branch Legislation Committee. It was claimed that this tax discriminated against stores owned by incorporated companies.

It was decided to recommend to the Executive Council that steps be taken to have the excise duty on Denatured Alcohol removed as had been recently done in the United States.

In compliance with a communication received from the Montreal Gold and Silversmiths' Section, it was decided to recommend to the Executive Council that means be taken to have a reliable employment bureau established in London, England, where Canadian manufacturers could obtain skilled workmen on payment of a nominal fee, it being understood that the proposed employment bureau would not bear the Association name or have any direct connection with the Association.

Three membership applications were recommended for acceptance.

It was decided to hold the annual meeting of the Montreal Branch this year on or about July 17th, and arrangements are now being made to that effect.

TORONTO BRANCH.

The regularly monthly meeting of the Toronto Branch Executive Committee was held on June 14th, when the following matters received attention:—

Smoke By-law.

Announcement was made of an important convention to be held in Detroit on the 27th, 28th and 29th of the month, of officials charged with the enforcement of local smoke bye-laws. It was decided that a member of the staff should attend this convention and endeavor, if possible, to have interested members in Walkerville and Windsor do the same, and report at a later meeting.

Workmen's Houses.

A communication was read from Mr. Thos. Roden enclosing a letter from Mayor Coatsworth on the subject of a Municipal Commission to build workmen's houses. Mr. J. G. Merrick, Secretary of the Civic League, who was present by request, explained in considerable detail the steps which had been taken by that organization to evolve some plan whereby the workmen of the city could be provided with comfortable homes at a nominal rental. He pointed out the natural desire of the city to secure more industries, how it became increasingly difficult to do so owing to the lack of accommodation for workmen, and how the building by-laws and the extension of the fire limits had worked out to the detriment of the working man.

After a general discussion it was decided that the Branch should instruct its representatives on the Civic League to confer with representatives of other organizations in the League with a view to gathering as much information as possible on the subject, and to report with suggestions at a later meeting.

Pawn Brokers.

In response to a suggestion received from the Jewellers' Section, a joint committee will be appointed to draft a Bill to amend the regulations governing pawn brokers, with a view to having same introduced into the Ontario Legislature at its next session.

Arrangements for the annual meeting of the Branch, to be held on Tuesday, July 10th, are now well in hand, and a large and successful gathering is looked for.

TRANSPORTATION IN CENTRAL AND WESTERN CANADA.

The views of the Manitoba Branch of the Canadian Manufacturers' Association on the proposed Hill lines are contained in the following resolutions, adopted at a recent meeting. The subject of transportation is one of intense importance to the people of Western Canada. The value of land, the growth of towns and the increase of industries all depend absolutely on the railway facilities of particular sections. Naturally then the proposition of Mr. Hill to add another system to the network of railways which is now being spread over the country, meets with hearty approval throughout the West. The preamble and resolutions are as follows:—

Whereas, there are in Western Canada many millions of acres of land of great economic value still unsettled and unproductive, owing principally to the lack of transportation facilities.

And Whereas, owing to the great distance of those Western communities already settled from the seaboard, and from the great industrial and commercial centres, the success and prosperity of such Western communities is dependent in an extraordinary degree on the sufficiency of transportation facilities for the expeditious handling of traffic at the lowest possible cost,

And Whereas, the extraordinary rapidity with which the newer portions of Western Canada are being settled promises to cause such an increase in the volume of traffic, as is likely to overtax the capacity of existing means of transportation, even with the addition of new systems now under construction,

And Whereas, experience has proved that the most effective control of freight rates is healthy and active competition for traffic.

And Whereas, it does not appear that the producers and consumers of Western Canada are yet enjoying the lowest rates of freight compatible with successful operation of existing railways,

Therefore, Be It Resolved, that in the opinion of the Manitoba Branch of the Canadian Manufacturers' Association, the Dominion Government should be strongly urged to afford all reasonable encouragement to any proposition looking to the increase of transportation facilities in Western Canada, and that no legislative obstacles should be placed in the way of any railway wishing to build lines in any direction,

Be It Further Resolved that in granting privileges to transportation companies the Dominion Government, in the interests of Canada as a whole, should see that foreign ports and shipping are not benefited at the expense of Canadian ports and shipping.

NEW MEMBERS.

Passed by the Executive Council in June, 1906.

Collingwood, Ont

THE COLLINGWOOD FURNITURE CO., OF ONTARIO, LTD.—
Furniture.

Lindsay, Ont.

LINDSAY LUMBER MILLS.—Lumber, Lath and Shingles.

Marbleton, Que.

WESTON & WILLARD MFG. CO.—Lumber, Sash and
Door, Moulding, etc.

Montreal, Que.

G. GILMORE.—Augers and Wood-boring Tools.
 THE IMPERIAL MATCH CO., LTD.—Matches.
 SUGARS, LTD.—Maple Syrup and Canned Fruits.

Orillia, Ont.

NATIONAL HARDWARE CO., LTD.—Builders' Hardware
 and Light Iron Castings.

Sherbrooke, Que.

W. R. WEBSTER & Co.—Cigars.

Toronto, Ont.

CANADIAN OLIVER TYPEWRITER CO.—(Albert Skill, 2nd Member).
 DOMINION STAINED GLASS CO.—Art Glass and Beveling.
 THE NASMITH CO., LTD.—(John Turnbull, 2nd Member).
 THE NATIONAL BRASS & MFG. CO., LTD.—Brass and Metal Goods.
 TORONTO FOUNDRY CO., LTD.—(L. L. Anthes, 2nd Member).
 WOOD PRODUCTS CO., OF CANADA, LTD.—Wood Alcohol, Charcoal and Acetate.

Vancouver, B. C.

THE BRITISH COLUMBIA SUGAR REFINING CO., LTD.—Sugar and Syrup.

J. LECKIE CO., LTD.—Boots and Shoes.

Williamstown, Ont.

MCDUGALD MILLING CO.—Flour.

Winnipeg, Man.

FARMER'S ADVOCATE, OF WINNIPEG, LTD.—Printing and Publishing.

THE MCCLARY MANUFACTURING CO.—(J. W. Driscoll, 2nd Member).

New Fire-proof Material.

A new fire-proof material has been originated in Russia, and takes its name, Uralite, from the Ural Mountains, where a large quantity of asbestos, which constitutes the fundamental component of Uralite, is obtained. It has proved a highly efficacious fire-resisting material, and is said to be capable of withstanding a much greater degree of heat, without exhibiting any apparent effect, than any fire-proof material at present on the market. Coupled with this fact, it is extremely light, of great strength, is durable, and is manufactured in sheets of varying sizes and thickness, thus rendering it a first-class material for building purposes.

Although asbestos enters largely into the composition of Uralite, it is by no means the only important substance incorporated in its manufacture, since asbestos in its pure form, although it will resist a high degree of heat, is liable to disintegrate under the influence of excessive temperature, and this peculiarity to a great extent nullifies its utility.

The most noticeable feature of Uralite is the facility with which it may be handled, and adapted to other materials as a protector against fire. It can be glued and nailed without any fear of its splitting during the latter process. It is specially available for paneling or other similar purposes, and can be grained or otherwise treated precisely as if it were wood. It does not swell or shrink under fluctuating climatic conditions; is waterproof, and is a complete electric insulator.

The remarkable immunity of the material from climatic changes may be gathered from the fact that a piece of the substance may be plunged into boiling water and then immediately steeped into frozen mercury without showing any shrinking, disintegration or other change, physical or chemical. It is capable of withstanding a great strain—18 tons per square inch, in comparison with Portland cement, which is only capable of supporting nine tons—so that it is an ideal material for floors or ceiling.—American Manufacturer.

WHAT TECHNICAL SCHOOL SHOULD BE.

The Technical Education Committee of the Toronto Branch of the Canadian Manufacturers' Association are of the opinion that a Technical School in Toronto should be established upon the following lines:—

1. The Technical School should be a secondary school, a good primary school education being required as a qualification for entrance and the curriculum of the school so outlined as to prevent unnecessary overlapping with the ordinary high schools.

2. Adequate provision should be made for a commercial museum.

3. It would not be advisable to attempt to draw up complete courses of study. The present curriculum should be adopted and developed, and the work of the school arranged so as to meet the needs of local working men and industries.

4. The work of the school should be developed so as to cover a series of different courses. As examples, we may suggest the following:—

Commercial Course.

Commercial Geography, Elements of Commerce and Commercial Law, Bookkeeping, Shorthand and Typewriting, advanced English composition (additional languages, e.g., French, German and Spanish, if found advisable).

Mechanical and Electrical Engineering.

Steam, Machine Construction, Mechanical Drawing, Strength of Materials, Applied Mechanics, Applied Electricity, Locomotive Engineering, with general laboratory instruction (including Pattern Making, Moulding, Smithwork, Pipe-fitting and Electrical Fitting).

Building Trades.

Building Construction, Applied Mechanics, Architectural Drawing, and shop-work (including Carpentry and Joinery), (Plumbing, Brick Work and Masonry, House and Sign Painting, Metal Plate Work, Plastering, Steam Fitting).

Textile Trades.

Applied Chemistry, Textile Design, Spinning, Weaving, Dyeing and Color Printing.

Printing Trades.

Drawing and Design, Typography, Lithography, Engraving.

Applied Chemistry.

Chemistry, organic and inorganic, Applied Chemistry (including Chemistry of Soaps, Oils and Colors, Brewing, Rubber Manufacture, Leather Manufacture, Paper and Pulp-Making, Glass Manufacture), Metallurgy.

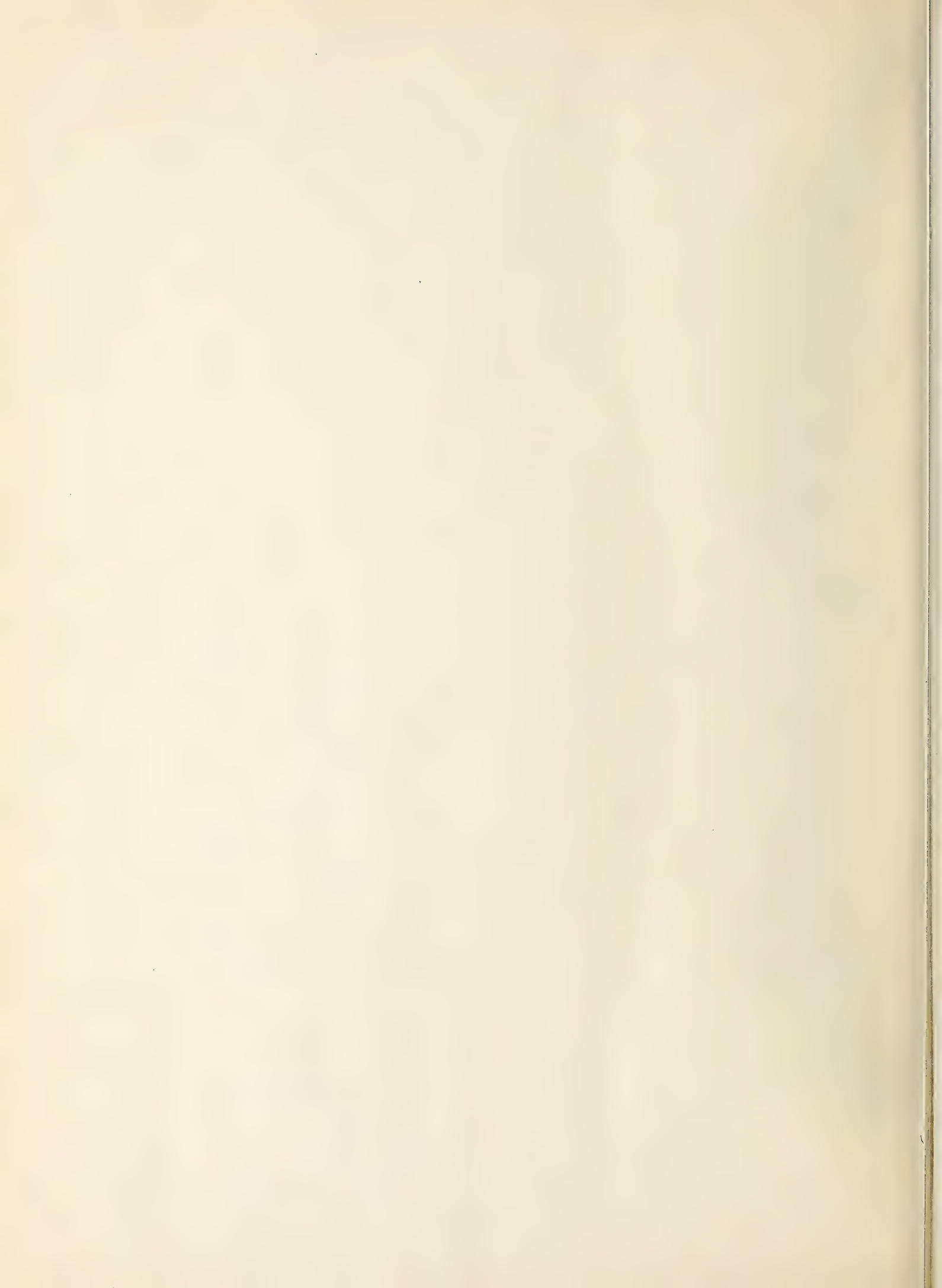
Domestic Industries.

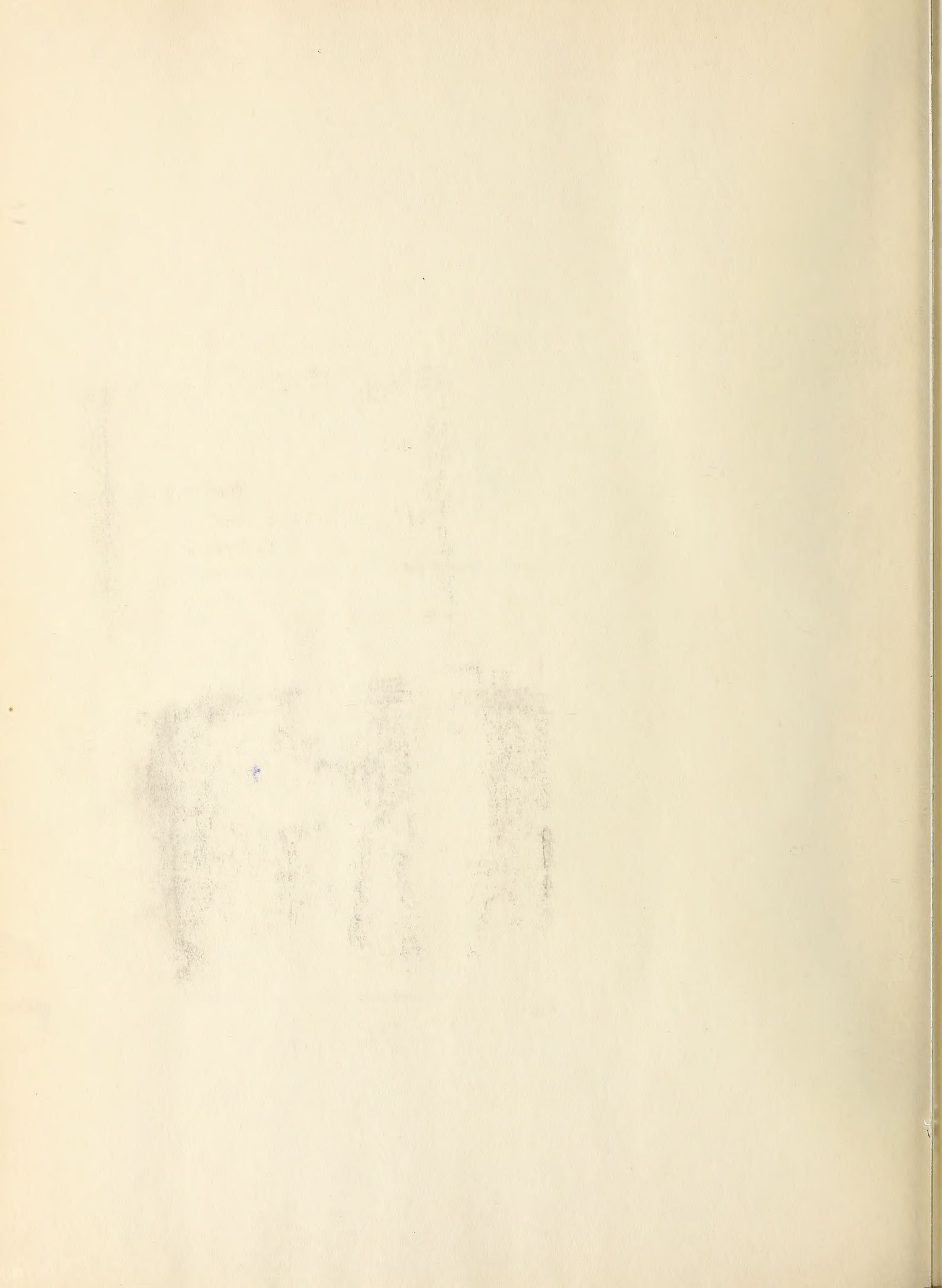
Cookery and Domestic Economy, Laundry Work, Millinery and Dressmaking.

Applied Art.

Drawing and Coloring, Design and Composition, Modeling, Applied Design (e.g., Textile Materials, House Decoration, etc.)

5. As the Technical School will be of direct service to the Province at large, it should receive special support from the Provincial Government, which support should facilitate the complete working out of the courses suggested.





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